

Examining the Stigma and Stereotypes Related to Involuntarily Childless Women Using the
Stereotype Content Model and Weiner's Attribution Affect Action Model

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ABSTRACT

The degree to which involuntarily childless women are stigmatized, stereotyped, and socially sanctioned by the Canadian general public is not well understood. Using a series of online questionnaires which targeted variables outlined by the Stereotype Content Model (SCM) and Weiner's Attributions-Affect-Action (AAA) model, I examined the attributions associated with various groups of involuntarily childless women, affective reactions elicited by the women, and whether different modes of support to aid the women in accessing assisted reproductive technology (ART) to overcome fertility issues would be offered by participants. To determine the appropriateness of using the SCM to examine differential stereotypes applied to involuntarily childless women, for Study 1 a sample of undergraduates ($N=204$) rated different categories of women on core SCM variables. To further test the suitability of the SCM and examine the potential use of the AAA model, in Study 2 another sample of undergraduates ($N=195$) rated different categories of women encompassing diverse contexts of infertility or reproductive challenges (i.e., locus of control for fertility) on the main variables for each theory. Expanding on the first two studies, Study 3 employed a between-group design to examine the affective and behavioural outcomes associated with stereotypes of involuntarily childless women. Individuals from an undergraduate sample ($N=183$) were randomly presented one of four vignettes which described an involuntarily childless woman that represented one of the four SCM quadrants. Participants rated the woman they were assigned on the core SCM and AAA model variables. To expand on Study 3, a stratified by province, randomly selected Canadian sample of participants ($N=554$) was recruited. Participants were randomly assigned to one of four vignettes and rated the involuntarily childless woman they read about on the main SCM and AAA model variables. A clear pattern emerged across each of the studies whereby some involuntarily childless women were more negatively stereotyped compared to others. In particular, women who: 1) experienced fertility issues due to their STI status; 2) were potentially capable of personally affording fertility treatments; 3) were trying to "have it all" (career and motherhood); and/or, 4) were potentially avoiding the experience of pregnancy by using a surrogate tended to be held more responsible, evoked more contempt, and were not admired, envied, pitied, nor seen as deserving of financial support in their pursuit of fertility treatments compared to other groups of women. However, in contrast to past literature, overall many of the women in the present research were positively evaluated. For example, none of the women were ever considered to be "bad mothers" and

participants thought that they “deserved to access and receive IVF” to realize their motherhood intentions. Overall, the findings support the utility of the SCM and AAA model for examining the stereotypes and sanctioning associated with involuntarily childless women. Further, the stereotypes and sanctioning enacted on these groups are quite nuanced and dependent on perceived locus of control for fertility issues. Suggested interventions are those that target fertility beliefs/knowledge as well as social norms around childlessness. Further investigation of public policies regarding access to ART as well as additional research on the relationship between felt/perceived and enacted stigma related to involuntary childlessness are recommended.

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LIST OF ABBREVIATIONS

AAA = Attribution, Affect, Action
ANOVA = analysis of variance
ART = Assisted reproductive technology
ASRM = American Society for Reproductive Medicine
Beh = behavioural
CARTR = Canadian Assisted Reproductive Technologies Register
CCTB = Canada Child Tax Benefit
CDN = Canadian
CFAS = Canadian Fertility and Andrology Society
ECEC = early childhood education and care
ESHRE = European Society of Human Reproduction and Embryology
H = hypothesis
HIV/AIDS = human immunodeficiency virus/acquired immune deficiency syndrome
ICSI = intracytoplasmic sperm injection
IUI = intrauterine insemination
IVF = In vitro fertilization
LGB = lesbian gay bisexual
LGBTQ = lesbian gay bisexual transgender queer
NCBS = National Child Benefit Supplement
NDP = New Democrat Party
NHS = National Health Service
NICE = National Institute for Health and Clinical Excellence
PAWS = Personalized Access to Web Services
QOL = quality of life
RQ = research question
SCM = Stereotype Content Model
STI = sexually transmitted infection
TPB = theory of planned behaviour
UCCB = Universal Child Care Benefit
U.K. = United Kingdom
U.S. = United States
WHO = World Health Organization

CHAPTER 1. RESEARCH OVERVIEW

While most individuals expect to become parents one day, many are faced with difficulties in bearing/siring children and cannot achieve this desired outcome. There are a variety of biological and social reasons why people are unable to reproduce, including myriad forms of fertility problems (e.g., low quantities and quality of ovum and sperm; scarred uterine lining or fallopian tubes), competing life goals (e.g., completion of education, development of career), and overriding contextual circumstances (e.g., presence of a suitable life partner/co-parent). In particular, social factors can directly impact the biological capability of individuals to reproduce; there is ample evidence at the population level that the fertility of females peaks between the ages of 20 and 25 (Johnson & Tough, 2012; Murray & Pizzorno, 2012), begins to decline at age 28, and faces a steep decline at age 35 (Virtala et al., 2011; Peterson et al., 2012). Often to the surprise of many people who are faced with fertility issues when they get older, age plays a substantial role in the reproductive capacity of both men and women, although the amount of viable eggs a woman possesses is considered the most crucial component of fecundity (Harris, Fronczak, Roth, & Meacham, 2011). This natural inevitability can lead to a multitude of potential outcomes for individuals. For people who decide from an early age that they will not have biological children and maintain this position throughout their lives (i.e., voluntary childlessness), the decline in fertility will likely not result in any negative effects. However, the experience of a fertility decline for people who expected to have biological children at some point but delayed and did not have any known fertility issues prior (i.e., involuntary childlessness), can be quite adverse. Additionally, within the parenthood and childlessness literature considerations of anything but biological parenting (e.g., adoption) are considerably lower.

Regardless of the reason individuals are unable to have biological children, a general consensus persists within the literature that not being able to have biological children when one wishes to do so, commonly referred to as involuntary childlessness, is quite stressful (Greil et al., 2010; Johnson & Fledderjohan, 2012; Peloquin & Brassard, 2013) and is considered one of the most distressing life crises for individuals who experience and identify with this condition (Blyth & Moore, 2001; Fekkes et al., 2003; Greil et al., 2011). While many involuntarily childless individuals have reported experiencing considerable psychological anguish when faced with reproductive shortcomings (Greil, McQuillan, Johnson, Slauson-Blevins, & Shreffler, 2009;

Greil, Slauson-Blevins, & McQuillan, 2010; Wichman, Ehlers, Wichman, Weaver, & Coddington, 2011), this experience seems to disproportionately affect women (Chachamovich et al., 2010; Galhardo, Pinto-Gouveia, Cunha, & Matos, 2011; Wichman et al., 2011; Bell, 2013; Huppelschoten et al., 2013; Peloquin & Brassard, 2013; Peterson et al., 2014). A significant amount of research has examined the felt and perceived stigma reported by involuntarily childless women, which has largely been reported as negative and highly stigmatizing (e.g., Lampman & Dowling-Guyer, 1995; Kopper & Smith, 2001; Baker, 2003; Bell, 2012; Walsh, 2012). However, examinations of public and enacted stigma related to involuntary childlessness at the community level (i.e., cultural values, social norms) have received considerably less attention and the outdated nature of, and inconsistencies within the literature (e.g., conflation of terms, misuse of language) make it difficult to definitively conclude the degree to which involuntarily childless individuals are stigmatized and stereotyped by the general public at the present time in Canada.

Gaining a better understanding of how people perceive and potentially interact with involuntarily childless individuals can aid the provision of counselling services for people experiencing distress associated with this situation as well as the development of education materials and interventions focused on reducing enacted stigma and stereotyping associated with childlessness. Further, with projections of more people needing access to ART (Johnson & Tough, 2012; ASRM, 2013a; Kocourkova, Burcin, & Kucera, 2014) it would be pertinent to know beforehand how likely it is that the Canadian general population would support proposed government tax and policy changes around this technology. For example, would they be willing to vote for a political party with a platform aimed at including ART within our universal healthcare program, and concurrently raising taxes to financially support this change? Would they actively protest the government in power should tax and policy changes be proposed? The inclusion or exclusion of ART in the healthcare system alters the level of accessibility of this technology for involuntarily childless individuals. If the general population is in favour of involuntarily childless individuals gaining easier access to ART, this might provide evidence for underlying beliefs that reproduction and fertility is a biomedical, rather than a social issue (Bell, 2013; Martin, 2017). However, if people do not see the value in including ART within our universal healthcare model, which would make it accessible to all Canadians, this may point to larger issues related to social sanctions around the types of people who should become parents. It

might also suggest that reproduction and fertility are viewed more as a personal issue (Bell, 2013; Martin, 2017) or even that parenting and caring are not highly valued (Slaughter, 2015).

The objective of this dissertation was threefold. First, I wanted to contribute to the relative dearth of research examining public and enacted stigma directed towards involuntarily childless women within a Canadian context. Second, with the projections of greater intentions to use ART I wanted to inquire about the level of support among the Canadian general population for proposed government tax and policy changes to increase access to this technology. Third, I wanted to examine how enacted stigma towards involuntarily childless women relates to support for proposed government tax and policies related to ART access. To gain a better understanding of the focus of this dissertation, there is a diverse body of literature to summarize. For the literature review, first, a brief examination of the concept of *parenthood* is examined followed by the presentation and critique of the literature on *childlessness*. Next, an exploration of the concept of *stigma* (including related terms such as deviance, prejudice, and stereotyping) and how it links to the experience of childlessness is provided. Finally, considering the increase in use among some childless groups, issues related to *assisted reproductive technology* is highlighted. In addition, the two theoretical models that were adopted for this dissertation are outlined.

1.1 A Review of the Literature

Parenthood has been described from a variety of biological, human rights, developmental, social, and spiritual perspectives. For example, some consider it to be a biological inevitability, an instinct (Palha & Lourenco, 2011; Morgan, Merrell, Rentschler, & Chadderton, 2012), or a human right (Center for Reproductive Rights, 2013). Others consider it to be a rite of passage (Palha & Lourenco, 2011) or major transition/developmental period in the lives of many individuals (Ulrich & Weatherall, 2000; Palha & Lourenco, 2011), essential for achieving adult status (Blatterer, 2007; Dykstra & Hagestad, 2007; Rothrauff & Cooney, 2008). For many, parenthood can also be a source of existential meaning that gives purpose to one's life (Morgan et al., 2012; Gold, 2013). Socially, many consider parenthood to be a social norm or expectation (Palha & Lourenco, 2011; Gold, 2013), and part of the normal functioning of marriage (Gold, 2013). Accordingly, the majority of individuals from developed regions like Canada, the United States, and many European nations intend to have biological children one day (Nouri et al., 2014; Schytt, Nilsen, & Bernhardt, 2014; Habbema, Eijkemans, Leridon, & te Velde, 2015; Sørensen et

al., 2016; Vassard, Lallemand, Nyboe Andersen, Macklon, & Schmidt, 2016; Hammarberg et al., 2017), and believe that it is an important undertaking (Rovei et al., 2010; EMD Serono, 2011; Virtala et al., 2011; Bunting et al., 2013; Ekelin, Akesson, Angerud, & Kvist, 2012; Peterson et al., 2012).

Having children has been associated with the attainment of positively valued goods or rewards, but can also prevent individuals from reaching other goals, resulting in a cost benefit analysis to be undertaken (Kuhnt & Trappe, 2013; Sarlo, 2013). To this end, parenthood has been described as a transformative experience, providing both stress and rewards (Nomaguchi & Milkie, 2003). Early on, Hoffman and Hoffman (1973) distinguished three distinct categories of the value of children: 1) social rewards (e.g., adult status, group norm conformity, links to larger community); 2), emotional or psychological rewards (e.g., enhanced feelings of competence, exercise of power and influence); and, 3) economic rewards (e.g., children contribute to welfare of family and take care of parents in old age). Some of the potential benefits of having children reported in the literature include (but are not limited to): having someone to love (Kendall et al, 2005; Thompson & Lee, 2011; Sørensen et al., 2016) and be loved by (Hoffmann & Hoffman, 1973; Neal, Groat, & Wicks, 1989; Fawcett, 1988; Sørensen et al., 2016); having a descendent (Palha & Lourenco, 2011); increasing marital/relationship cohesion (Palha & Lourenco, 2011); having an opportunity to assert responsibility (Kendall et al, 2005); fostering connections with partners, friends, and family (Kendall et al., 2005; Gold, 2013); gaining social capital (Bühler, 2008); restoring self-confidence (Kendall et al., 2005); giving purpose to life (Unger, Molina, & Teran, 2000; Fekkes et al., 2003; Rosengard et al., 2006); transitioning to adulthood (Arnett, 1998; Tichenor et al., 2016); development of personal identity (Garelli, 2007; Katz-Wise, Priess, & Hyde, 2010; Sørensen et al., 2016); it is expected to be fun (Langdridge, Sheeran, & Connolly, 2005); supporting one's 'masculine' status (Sylvest, Christensen, Hammarberg, & Schmidt, 2014); providing stability (Friedman, Hechter, & Kanazawa, 1994); and, meeting basic practical and psychological needs such as financial security in old age (Caldwell, 1982; Zelizer, 1985). Following Hoffman and Hoffman (1973), Fawcett (1978; 1988) developed the theory of the Value of Children, with the aim of examining both the positive and negative aspects related to raising children. Fawcett (1978; 1988) presented five different categories of potential costs of children, including direct economic costs, income-related opportunity costs, opportunity costs other than income, psychological costs, and physical costs. Additional potential costs which have

been reported include childbearing burdens, immaturity, social worry, ecological worry, marital stress, financial problems, physical suffering, and body-image concerns (Guedes, Pereira, Pires, Carvalho, & Canavarro, 2013; Guedes & Canavarro, 2014). Understanding the potential value attributed to children by parents (or future parents) has been found to underlie motivations for childbearing, fertility intentions, and subsequent fertility outcomes (Hoffman & Hoffman, 1973; Kagitcibasi, 1982a, 1982b; Fawcett, 1983; Lotz, 2009; Sorensen et al., 2016).

The majority of Canadians report that they intend to have two biological children (Edmonston, Lee, & Wu, 2010), which aligns with the two-child social norm (Berrington, 2004; Gauthier, 2006; Hin, Gauthier, Goldstein, & Bühler, 2011; Morgan & Rackin, 2010) and reported fertility intentions in other developed countries (Schytt, Nilsen, & Bernhardt, 2014; Sylvest et al, 2014; Habbema et al., 2015; Meissner, Schippert, & von Versen-Hoynck, 2016; Morita, Ohtsuki, & Hiraiwa-Hasegawa, 2016; Sorensen et al., 2016). There are even a substantial proportion of individuals who report that they desire three or more biological children (Hagewen & Morgan, 2005; Sørensen et al., 2016). In one American study, 93% of men and women reported that they intended to have their first child between the ages of 25 and 34, while 84% of men and 89% of women wanted to have their last children between the ages of 30 and 39 (Peterson et al., 2012). Another study with a Danish sample reported that for 75% of men and 77% of women, the intended age range for their first child was 25-29 years, while intended age for a last child ranged from 30-34 years for 42% of men and 47% of women and from 35-39 years for 44% of men and 35% of women (Sorensen et al., 2016). A Canadian sample of men reported that the ideal age to become a parent was between age 25 and 29 (Roberts, Metcalfe, Jack, & Tough, 2011), while another sample included men who reported the ideal age was about 30 years (but they did not expect to have their first child until about age 37) and the women reported that about 27 years was ideal (but they did not expect to have their first until about age 32) (Daniluk & Koert, 2012). The concept of “social deadlines for childbearing” have also been discussed (Mynarska, 2010; Billari et al., 2013), whereby people approaching biological or social age limits often rush to realize their fertility intentions and avoid further postponement (Kapitany & Speder, 2012).

Despite the abundance of people who intend to have biological children at some point in their lives, fertility rates in countries like Canada and the United States have been in decline since the early 1970s (Virtala et al., 2011; Daniluk, Koert, & Cheung, 2012; Milan, 2013;

Hamilton, Martin, Osterman, Driscoll, & Rossen, 2018). *Fertility rate* is defined as the ratio of live births in an area to the population of that area expressed per 1000 population per year and *total fertility rate* is defined as the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with current age-specific fertility rates (Statistics Canada, 2012). Alternatively, an *age-specific fertility rate* refers to the number of births to females in a specific age category in a particular year compared to the number of females in that age category (United Nations, 2009; Statistics Canada, 2012); a value which is derived by dividing the number of births during the reference year to females of a specified age at the time of the birth by the number of females of that age in that reference year (Statistics Canada, 2012).

The last year that the total fertility rate in Canada exceeded the replacement level of 2.1 was in 1971 (Milan, 2013). As of 2016, the average number of children per woman in Canada was estimated at 1.54 compared to 1.68 in 2009 (Provencher, Milan, Hallman, & D'Aoust, 2018). A variety of theories have attempted to explain this decline, but the most prominent one is that more men and women are delaying the age at which they have their first biological child leading to overall unintended childlessness, age-related infertility, and/or fewer children than intended (Tough, Tofflemire, Benzie, Fraser-Lee, & Newburn-Cook, 2007; Cooke, Mills, & Lavender, 2010; Johnson & Tough, 2012). While fertility can decrease as both men and women get older, the most crucial component of fertility is the amount of viable eggs a woman possesses (Harris, Fronczak, Roth, & Meacham, 2011). On average, female fertility begins to significantly decline at age 28 onwards, with the decline becoming much faster after age 35 (Virtala et al., 2011; Peterson et al., 2012). Yet in Canada, more women are waiting until they are 30 years or older to give birth to their first child (Cooke et al., 2010; Johnson & Tough, 2012; Martin, Hamilton, Osterman, Curtin, & Mathews, 2013; Milan, 2013), well past the peak biological age for childbearing, which is generally considered between age 20 to 25 (Johnson & Tough, 2012; Murray & Pizzorno, 2012). In 2016, the average age of Canadian women who gave birth for the first time was 29.2 years, with fertility rates increasing for women in the 30 to 34, 35 to 39, and 40 to 44 years brackets (Provencher et al., 2018). Similar patterns have been found among women in the U. S. and many European countries (e.g., Italy; Sobotka, 2010; Kreyenfeld et al., 2010; Martin et al., 2013; Matthews & Hamilton, 2014).

Considering all of this, some critiques must be noted. Much of the literature on parenthood has focused on heterosexual individuals' intentions and experiences of having *biological children* that are the result of their sperm/egg fertilizing with a partner's sperm/egg. Indeed, adopting children appears to be an uncommon phenomenon among heterosexual individuals (Smock & Greenland, 2010). When reporting on intentions to have children, researchers also tend not to distinguish between the kinds of children people intend to have (e.g., biological, fostered, adopted) or even circumstantially end up with (e.g., benefactors, custodial arrangements, step-children), unless participants happen to identify as gay or lesbian, both of which are cases where one or both individuals may not have the option to have biological children. Many individuals also hold ideals of parenthood that focus on being a parent to your own biological child while downplaying all of the other ways in which people can become "parents", such as with fostering and/or adopting children, becoming step-parents, caring for nieces or nephews, as well as owning/caring for pets (Martin, 2018). When it comes to parenting, the predominant beliefs and messages seem to be that "*biology and DNA matters*", "*children are the result of penile-vaginal intercourse*", and quite often "*children are born to married, heterosexual parents*".

1.2 Childlessness

Childlessness has been defined as the absence of children, either by intention or by circumstance (Bulcroft & Teachman, 2004). Individuals without children tend to be classified as either voluntarily childless (i.e., by intention) or involuntarily childless (i.e., by circumstance; Poston & Trent, 1982; Bulcroft & Teachman, 2004; Abma & Martinez, 2006; Mollen, 2005; Koropecj-Cox, Romano, & Moras, 2007; Gobbi, 2011; McQuillan et al., 2012; Berrington, 2017). Yet, some have critiqued this dichotomy on the grounds that it does not reflect all of the pathways to childlessness and that has led many researchers to group childless individuals together, regardless of their distinct experiences (Vissing, 2002; Abma & Martinez, 2006; An & Cooney, 2006; Rothrauff & Cooney, 2008; Connidis, 2010; Tanturri et al., 2015). The language used to distinguish voluntarily and involuntarily childless groups can also problematize (e.g., *childless*) or glorify (e.g., *childfree*) the situation of not being a parent (McQuillan et al., 2012). It should also be noted that like the literature on parenthood, there is an underlying assumption that childlessness relates to *biological children*. Researchers and participants rarely distinguish the kinds of children people intend to have.

In their 2004 publication, Bulcroft and Teachman outlined a few additional issues to consider when classifying individuals and couples into different childless categories. First, childlessness has generally been conceptualized as an individualized phenomenon, with most researchers and theorists focusing on women. Focusing only on women at the individual level, though, can obscure both the issue of male childlessness and the dyadic processes involved in decisions to remain childless. Second, distinguishing between childlessness by choice versus circumstance is muddled by the biological facts of infertility and sub-fecundity (i.e., delaying childbearing to a point where conception becomes less probable). Infertility is not always definitive and delaying parenthood does not necessarily mean childlessness later in life was a choice as there are many circumstances that result in this life course. Further, the ability to have a child is not only contingent on one's biology; it also depends on the social environment and social structural conditions (e.g., access to family leave, finances, housing, employment, relationship status, etc.; Martin, 2017). Third, circumstances other than infertility may bring about unintended childlessness. For this reason, childbearing intentions and outcomes should also be examined in studies of childlessness. Finally, when classifying individuals based on childlessness intentions, the level of commitment to those intentions should also be determined. For example, Veevers (1980) and Houseknecht (1987) distinguished between early articulators (i.e., individuals who early on commit to not having children) and postponers (i.e., individuals who delay childbearing, but may still decide to have children later on) and argued that these individuals experience childlessness quite differently from one another because of the difference in intentions. Some individuals who postpone having children to a point where they are no longer able to have them biologically may come to identify as "voluntarily" childless to signify acceptance of their situation (Jeffries & Konnert, 2002). As will be elaborated below, other postponers may find themselves unintentionally childless when faced with age-related difficulties in naturally conceiving (Koert, 2014). Ultimately, there is a range of voluntariness among voluntarily childless people. For the purposes of this dissertation, the term *involuntary childlessness* is used to represent the broader category of contexts in which individuals might desire but are unable to have a biological child. Within this broad category are three distinct sub-categories of individuals: those that are infertile (i.e., biological abnormality of the reproductive system); those who are circumstantially childless (e.g., members of the LGBTQ community and

single individuals); and those who are unable to conceive due to advanced maternal age (i.e., natural age-related fertility decline).

Reported rates of overall childlessness appear to be increasing in Western countries (Tocchioni, 2018). Some researchers have stated that the proportion of women remaining childless in European countries in such as the United Kingdom, Italy, and Spain range between 20 and 30% (Tanturri & Mencarini, 2008). Similar rates of childlessness have been reported in Canada, the U.S., Japan, and Australia (Harding, 2006; Dye, 2008; Hara, 2008). However, these data relate to total childlessness and do not distinguish between all the various categories of childlessness, meaning that all women regardless of the reason for the childless state are included in the rates. For example, estimates of childlessness often include those individuals whose children have moved out of the home (i.e., household census). These individuals technically have children, but the way in which data is collected to determine rates of childlessness in households leads to misleading numbers. Further, for individuals who truly have never had children (biological or otherwise), there are many reasons for why this might be the case: these individuals may be involuntarily childless, voluntarily childless, or circumstantially childless (i.e., in circumstances where they cannot act on their desire to have biological children or have more biological children; Graham & Rich, 2012). Additionally, rates of childlessness often do not reflect the involvement and experiences of men. Overall, failing to account for the various “pathways” to childlessness in the measurement and reporting of these rates limits our ability to truly estimate the number of voluntary versus involuntary childless people and to understand their distinct experiences (Basten, 2009).

1.2.1 Voluntary childlessness. Various terms have been adopted and used interchangeably by scholars to describe people who consciously do not want to have children. Some researchers have used the term *voluntarily childless* to describe individuals who do not have any children at present (biological or otherwise), and do not desire to have any in the future (Houseknecht, 1987; Gillespie, 2000; Jeffries & Konnert, 2002; Tessarolo, 2006; Blackstone & Stewart, 2012) regardless of their fertility status (Gillespie, 2000; Agrillo & Nelini, 2008). Other common terms which have been used to label people who have no desire to have children include *childfree* (Koropeckyj-Cox, Pienta, & Brown, 2007; Durham, 2008; Gold, 2013), or *childless by choice* (Veevers, 1980; Reti, 1992; Paul, 2001). There has been much debate regarding the use of *childless* versus *childfree*. According to some scholars, *child-less* implies

being without something which may be naturally and/or socially expected and desired (e.g., being home-less or friend-less; Gold & Wilson, 2003; Gold, 2013; Paul, 2001). *Child-free*, on the other hand, has a more positive connotation and can imply emancipation from something by choice (e.g., being care-free or disease-free; Bartlett, 1996; Basten, 2009). Since the 1970s, most researchers who examine childlessness have distinguished *voluntarily* childless from *involuntarily* childless (Moore, 2014), and the majority of studies published since the 1980s have adopted the terms *voluntarily* and *intentionally* (Blackstone & Stewart, 2012). For the purposes of this discussion, the term voluntarily childless will be used most frequently to describe individuals who intentionally do not have children.

Another issue which can arise for researchers is the fact that individuals often reject the common terminology used and labels placed on them, suggesting the need to inquire about preferred terms among research participants (Moore, 2014). Further, some childless/childfree people are grouped under the same operational definition despite having vastly different experiences (Basten, 2009; Moore, 2014). For example, individuals who delay childbearing are often grouped with those who forego childbearing altogether, even though they may simply be postponing at the time of research participation and might desire children in the future (Moore, 2014). Individuals who consciously forego childbearing are also often clustered with people who have delayed childbearing until they have reached an age when they are no longer able to naturally conceive – these people may “come to terms” with their lack of fecundity and identify as “voluntarily” childless, but they may also be distressed and subsequently adopt the label “involuntarily” childless (Amba & Martinez, 2006; Kneale & Joshi, 2008). Solely considering childbearing and biological children can also limit our understanding because there are other pathways to becoming a parent (e.g., adoption, step-parenting, etc.) that might be salient to research participants.

Assumptions of heteronormative marriage and fecundity as markers of choice can also create problems within the voluntarily childless literature. While marriage is undoubtedly an important criterion for research related to married couples, it is not necessarily appropriate in the case of examining all cases of childlessness because not everyone who identifies as voluntarily childless has been/is married (Abma & Martinez, 2006). Yet some studies (e.g., Rovi, 1994; Park, 2002, 2005) have adopted operational definitions of voluntary childlessness which focus on the married status or number of years together to signify a couple’s level of commitment to a

childless lifestyle (Moore, 2014). Relying on marital and even couple status privileges both a heteronormative and relational understanding of reproductive choice (Moore, 2014); non-heterosexual and single/non-coupled individuals are also capable of deciding whether to have children (albeit, not necessarily biological children without medical interventions or donors). Fecundity is also problematic as a marker of choice around childlessness because some people who are voluntarily childless may be physically able to reproduce while others are not (i.e., fertile vs. infertile) (Abma & Martinez, 2006; Durham, 2008; Durham & Braithwaite, 2009), and there are also some people who identify as “childless by choice” but who are stepparents through marriage (Hayden, 2010). Overall, the heterogeneity of experiences points to the importance of considering the various pathways to voluntary childlessness.

Gillespie (2003) identified two underlying motivations for consciously remaining childless – the “attraction or pull of being childfree”, which is characterized by increased freedom and better interpersonal relationships, and the “rejection or the push away from parenthood”, which may involve a loss of identity and rejection of parenthood-related activities. For some, remaining childless means they do not have to radically adjust their lifestyles (Carmichael & Whittaker, 2007; Statistics Canada, 2008) and can spend their money on personal entertainment (Paul, 2001; Park, 2005), or even spend more time with alternative outlets for “pseudo-parenting”, such as pets (Basten, 2009) and/or nieces and nephews (Hansen, Slagsvold, & Moum, 2009; Pollet & Dunbar, 2009). Other groups state that there comes a point when they are simply “too old to have children” (Statistics Canada, 2008). People who “push parenthood away” often see parenting as being in direct conflict with career and leisured identities (Park, 2005) because they believe it is all-encompassing and impossible to reconcile with other important life goals (Maher & Saugeres, 2007), or fear that it may put strain on their relationships (Wu & Musick, 2008). Others claim that they do not possess “parental instincts” or simply have no interest in children (Gillespie, 2003; Park, 2005; Carmichael & Whittaker, 2007), sometimes due to traumatic childhood experiences which destroyed or discredited the idea of parenthood (Maher & Saugeres, 2007).

There is some evidence that voluntary childlessness is common in some countries (e.g., Finland, Sweden; Miettinen, 2010; Persson, 2010) for women with less education and low socioeconomic resources (Miettinen et al., 2014) and men with lower education levels (Barthold, Myrskylä, & Jones, 2012; Burkinsher & Zeman, 2017; Koppen et al., 2017; Rotkirch &

Miettinen, 2017). Voluntarily childless individuals with low incomes present an interesting case because many people in this group may identify as voluntarily childless because they have come to terms with the fact that they cannot afford to have children, but this does not mean they would not plan to have children if they had the financial means (Vissing, 2002). As a result, some of these individuals may be better labelled as circumstantially or even involuntarily childless. With the increasing costs of basic living, the expense of childrearing, and the lack of suitable, affordable childcare options, this group may continue to increase as well (Berrington, 2004; Mills et al., 2011; Schmidt et al., 2012). According to the available research, voluntary childlessness appears to be highest among people with the following characteristics: higher education (Agrillo & Nelini, 2008; Kneale & Joshi, 2008; Statistics Canada, 2008; Waren & Pals, 2013; Berrington, 2017; Frejka, 2017; Koppen, Mazuy, & Toulemon, 2017); higher personal income and more financial stability (Agrillo & Nelini, 2008; Statistics Canada, 2008); higher orientations toward work (Agrillo & Nelini, 2008; Statistics Canada, 2008); less traditional and conventional gender roles (Agrillo & Nelini, 2008; Lamprecht, Wagner, & Lang, 2008; Waren & Pals, 2013); lower levels of religious observance (Cwikel, Gramotnev, & Lee, 2006; Agrillo & Nelini, 2008); higher likelihoods of living in urban centres (DeOllas & Kapinus, 2002; Cwikel et al., 2006); less conservative political orientations (Agrillo & Nelini, 2008); and, Caucasian ethnicity (Waren, 2008; Waren & Pals, 2013).

As with childlessness in general, providing accurate estimates of voluntarily childless individuals poses some difficulty due to issues of identification and labelling. Often, there is a lack of distinction in discussing the various pathways to childlessness (e.g., biologically childfree, absolutely childfree) and the subsequent identities (e.g., childfree, childless; Blackstone & Stewart, 2012). However, based on the best available data, the proportion of people who intend/desire to remain voluntarily childless seems to be increasing in many Westernized countries, particularly Australia (Lee & Gramotnev, 2006; Australian Bureau of Statistics, 2007), New Zealand (Boddington & Didham, 2007; 2009), the United Kingdom (Berrington, 2004; Berrington, Stone, & Beaujouan, 2015), the United States (Abma & Martinez, 2006; Biddlecom & Martin, 2006; Dye, 2008; Agrillo & Nelini, 2008), Canada (Stobert & Kemeny, 2003; Edmonston, Lee, & Wu, 2010; Statistics Canada, 2017), and parts of Europe (Rosina & Testa, 2007; Frejka & Sobotka, 2008; Sobotka, 2009). Voluntarily childless women in the U.S. and Australia have been estimated between 7 and 9% (Abma & Martinez, 2006;

Hollander, 2007; Agrillo & Nelini, 2008). Similar rates have been reported in Canada (Stobert & Kemeny, 2003; Edmonston, Lee, & Wu, 2008; Ravanera & Roderic, 2009), Great Britain, the Netherlands, Austria, Bulgaria, Germany, Spain (Miettinen, Rotkirch, Szalma, Dono, & Tanturri, 2014); and Italy (Rosina & Testa, 2007; Miettinen et al., 2014). A number of demographic trends seem to correspond with these estimates, including fewer couples getting married; more couples choosing cohabitation over marriage and not making children a priority when they do choose to marry (Huston & Melz, 2004; Noordhuizen, de Graaf, & Sieben, 2010; Wanga & Abbott, 2013; Settle & Brumley, 2014), women's increased education and participation in the labour market; increased cost of housing and economic uncertainty; environmental uncertainty, concerns about climate change, and global willingness to recognize and address climate change; lack of supportive family policies, flexible working arrangements; and lack of affordable childcare (Berrington, 2004; Mills et al., 2011; Schmidt et al., 2012; Hammarberg et al., 2017; Martin, 2017). Advances in medical technology and improved access to birth control also make it possible for people to choose a different life course than parenthood (Noordhuizen et al., 2010; Wanga & Abbott, 2013; Settle & Brumley, 2014; Hammarberg et al., 2017). Along with the increase in rates of voluntary childlessness in the developed world, there appears to be some increased social acceptance of these lifestyle choices (Koropecj-Cox & Pendell, 2007a, 2007b; Noordhuizen et al., 2010; Wanga & Abbott, 2013; Settle & Brumley, 2014; Koropecj-Cox, Copur, Romano, & Cody-Rydzewski, 2018). However, a causal relationship between these factors and increased rates of voluntary childlessness has not been established, and negative stereotypes of childless individuals still abound (Rowlands & Lee, 2006; Koropecj-Cox et al., 2018).

1.2.2 Temporary childlessness and delayed childbearing. Voluntarily childless individuals may be subdivided into *early articulators* and *postponers* (Houseknecht, 1987; Veevers, 1980; Blackstone & Stewart, 2012; Lee & Zvonkovic, 2014). Early articulators tend to consciously decide early on that they do not want to have children and remain committed to this choice (Hagestad & Call, 2007; Hayford, 2009; Maximova & Quesnel-Vall'ee, 2009). While recent research suggests that the number of early articulators may be increasing in developed countries like the U.S. (Lee & Zvonkovic, 2014), most voluntarily childless individuals appear to be *postponers*. Postponers, or *temporarily childless* individuals, are those who might like to have a child in the future but are delaying this life course for various reasons (Blackstone &

Stewart, 2012; Lee & Zvonkovic, 2014), rarely as a “conscious choice” (Cooke, Mills, & Lavender, 2012). Like the literature on voluntary childlessness, the literature on “delayed childbearing” generally focuses on biological pathways to parenthood (i.e., getting pregnant, carrying a child to term) and rarely considers alternative modes of parenting (e.g., adopting).

Reported reasons for wanting to delay parenthood include pursuit of career or education (Carolan, 2007; Carolan & Nelson, 2007; Ravanera & Beaujot, 2014; Waldenstrom, 2016), not having or wanting to wait for the right partner (Benzies et al., 2006; Browning, 2007; Carolan, 2007; Carolan & Nelson, 2007; Ravanera & Beaujot, 2014; Sorensen et al., 2016; Berrington, 2017; Jalovaara & Fasang, 2017), wanting relationship stability (Benzies et al., 2006; Browning, 2007; Carolan, 2007; Sorensen et al., 2016), desiring to wait for a period of time after marriage (Ryan et al., 2005), desiring a gap between children (Ryan et al., 2005), wanting a good level of self-confidence and to feel “ready” (Benzies et al., 2006; Lampic et al., 2006; Tyden et al., 2006; Browning, 2007; Carolan, 2007; Sorensen et al., 2016), need to satisfy personal goals (Benzies et al., 2006), wanting stability in lives (Dobrzykowski & Stern, 2003), and wanting financial security (Ryan et al., 2005; Benzies et al., 2006; Waldenstrom, 2016). The literature on childbearing intentions and desires, as well as research examining individual life courses illuminates the fact that depending on when you ask a person about their plans for having children, different responses may emerge (Ravanera & Beaujot, 2014; Sorensen et al., 2016; Waldenstrom, 2016). For example, changes in relationship status (e.g., divorce, widowhood) and health issues can impact parenthood intentions much more for older individuals (Benzies et al., 2006; Browning, 2007; Carolan, 2007; Carolan & Nelson, 2007), while factors such as wanting to feel sufficiently mature for parenthood are less important for this group (Lampic et al., 2006; Tyden et al., 2006).

Again, estimating the rates of temporarily childless individuals is challenging as this is considered a transitory state that can change over the course of a person’s life. However, in Western countries such as Canada, the United States, Western Europe, Australia, and New Zealand, there appears to be an increasing trend for individuals to delay childbearing and postpone the timing of first (Umberson, Pudrovska, & Reczek, 2010; Martin et al., 2014; Matthews & Hamilton, 2014; Koert & Daniluk, 2017), and even subsequent pregnancies (Habbema et al., 2015). The availability of safe, effective, reversible contraception allows women to control when, and if, they become pregnant (Virtala et al., 2011; Johnson & Tough,

2012). New reproductive technologies can also offer people the chance to conceive later in life (e.g., egg freezing) or overcome biological difficulties with conception (e.g., fertility drugs or procedures such as in vitro fertilization; Wright, 2011; Johnson & Tough, 2012; Wyndham, Figueira, & Patrizio, 2012; Koert & Daniluk, 2016). There have been some reports that indicate that more people are interested in egg freezing to postpone childbearing (Goldman & Grifo, 2016; Lewis, Missmer, Farland, & Ginsberg, 2016; Milman, Senapati, Sammel, Cameron, & Gracia, 2017). Never have individuals been so squarely in control of their reproductive efforts. However, this applies largely to wealthier and more educated individuals who can afford contraception and reproductive technologies, than those who are poor and less educated (Martin, 2000; McLanahan, 2004). Overall, women who are most likely to delay pregnancy are middle-class with higher education (Lampic et al., 2006; Bretherick et al., 2010; Balasch & Gratacos, 2010; Virtala et al., 2011; Matthews & Hamilton, 2014). Female university students are a group that have increasingly delayed motherhood as they pursue professional, academic, and career training (Bretherick et al., 2010; Neyer, Lappegard, & Vignoli, 2013), which may result from the fact that the majority of fertility studies primarily sample white, affluent, heterosexual, female students (Bell, 2014). However, in regions that lack structured family policies (e.g., parental leave, childcare subsidies), some women seem to be postponing because they cannot afford children or because their careers compete for their time and energy (Tocchioni, 2018), with self-employed men and women as the exception - it appears that they are better able to reconcile family and work obligations (Koppen et al., 2017).

There are a number of advantages reported for men and women who postpone parenthood, including having established careers with financial security and career-time flexibility, enhanced emotional preparedness, personal development, committed co-parenting relationships, and a positive overall family experience (Lampic et al., 2006; Tyden et al., 2006; Tough, Benzies, Fraser-Lee, & Newburn-Cook, 2007; Bretherick et al., 2010; Cooke et al., 2010; Shaw, 2011; Virtala et al., 2011; Johnson & Tough, 2012; Wyndham et al., 2012; Mac Dougall, Beyene, & Nachtigall, 2012; Bodin et al., 2017). Despite the potential benefits to postponing parenthood, delaying childbearing can lead to a number of negative psychosocial and biophysical consequences for both women and men, including declined fertility (Lampic et al., 2006; Balasch & Gratacos, 2010; Bretherick et al., 2010; Cooke et al., 2012; Wright, 2011; Virtala et al., 2011; Daniluk et al., 2012; Johnson & Tough, 2012), pregnancy complications and adverse pregnancy

outcomes (Betancourt et al., 2010; Shah et al., 2011; Gravena, Sass, Marcon, & Pelloso, 2012; Goncalves & Monteiro, 2012). Postponing childbearing may also result in involuntary (or unintentional) childlessness, particularly in cases where a woman's age negatively impacts her ability to conceive and reproductive technologies are unable to overcome this decline in fertility (Karmon, Hailpern, Neal-Perry, Green, Santoro, & Polotsky, 2011; Koert, 2014; Koert & Daniluk, 2017). We are already seeing an increase in the number of women who postpone childbearing. As previously mentioned, the age at first birth for Canadian women has been increasing (Milan, 2013). Further, the difficulty of distinguishing between voluntary and involuntary childlessness increases as more women delay childbearing to the point when their chances of conceiving are dramatically decreased due to the age-related fertility decline (Karmon et al., 2011; Boivin et al., 2013; Koert, 2014; Habbema et al., 2015; Koert & Daniluk, 2017).

1.2.3 Involuntary childlessness and infertility. Individuals who want to have (generally biological) children, but are unable to do so, can be encompassed by the term *involuntary childlessness* (Letherby, 2002; Peters, Jackson, & Rudge, 2011; McQuillan et al., 2012; Gold & Wilson, 2003). In some contexts, a couple with children might be considered “involuntarily childless” if they do not have the desired number (e.g., more than one) or right type of children (i.e., boys), particularly among cultures with strong mandates around parenthood and beliefs that the primary purpose of marriage is to procreate (Greil, Johnson, McQuillan, & Lacy, 2011; Hampshire, Blell, & Simpson, 2012; Johnson, McQuillan, Greil, & Shreffler, 2014; Leyser-Whalen, Greil, McQuillan, Johnson, & Shreffler, 2018). For members of the LGBTQ community, the option to have biological children may be out of reach due to the high cost of fertility aids or inability to find a suitable gamete donor or surrogate to carry a child, and so they would be faced with the desire to have children without the means (Maxwell, Mathew, & Mulay, 2018; Rogalin & Brooks, 2018). Further, the heteronormative ideals of parenthood as well as research related to reproduction (with a heavy emphasis on biological children) limits our understanding regarding the fertility experiences and needs of members of the LGBTQ community who desire to become parents (Maxwell et al., 2018; Rogalin & Brooks, 2018).

Despite the various states in which an individual may be labelled or self-identify as *involuntarily childless*, this term has traditionally been conflated with *infertility* (Greil, 1991; Letherby, 2002; van Balen & Inhorn, 2002; Moulet, 2005; Earle & Letherby, 2007; Connidis, 2010; Greil et al., 2010; Bell, 2013; Johnson, Greil, Shreffler, & McQuillan, 2018). This

conflation is problematic in that not all involuntarily childless individuals are technically biologically infertile. Most medical authorities define infertility as the inability for a couple to conceive after 12 months of unprotected sexual intercourse (which does not necessarily result in permanent childlessness; Daniluk, 2001; Gaard, 2010; Greil et al., 2010; Shanley & Asch, 2009; Okun & Sierra, 2014; WHO, 2018), and the timeframe is shortened to six months of active attempts to conceive if the woman is over 35 years (Barrett, 2006). This variation acknowledges that the woman's age is the most important determinant of a couple's overall fertility (Balasch & Gratacos, 2010). Clinical distinctions are often made with respect to primary and secondary infertility, and there appears to be some variation in the literature regarding definitions of these terms. For example, some researchers have framed primary infertility as caused by anatomical, genetic endocrinological, and immunological problems leading to the inability to have a child (e.g., blocked fallopian tubes, decreased quantity and quality of oocytes) and secondary infertility as the result of untreated sexually transmitted infections, poor health care practices, exposure to toxic substances, and socio-cultural practices such as endogamous marriages (incestuous marriages) and female genital mutilation (Mumtaz, Shahid, & Levay, 2013). However, the operational definitions of primary and secondary infertility put forth by the World Health Organization (WHO) are as follows: primary infertility is the inability to conceive within two years of exposure to pregnancy (i.e., sexually active without contraceptives) among women aged 15 to 49 years old, and secondary infertility is the inability to conceive following a previous successful pregnancy and birth (Yao & Schust, 2002; Bhattacharya et al., 2010). Worldwide, most individuals experiencing infertility suffer from the primary variety (Inhorn, 2003). Researchers have also differentiated between 'current' infertility (i.e., are you now having difficulty conceiving) versus 'lifetime' infertility (i.e., have you ever had difficulty conceiving?; Bushnick, Cook, Yuzpe, Tough, & Collins, 2012). Current infertility is generally less prevalent than lifetime infertility, as the latter sums up all infertility experiences in a woman's life (Boivin, Bunting, Collins, & Nygren, 2007; 2009). Other issues to consider with respect to the medical definition of infertility include frequency of intercourse, contraceptive use, and childbearing intentions (Gurunath, Pandian, Anderson, & Bhattacharya, 2011). The frequency and timing of sexual intercourse can greatly impact a couple's chance of conceiving (Sinai & Arevalo, 2005; Wischmann, 2013). For some women using hormonal contraception (e.g., birth control pills or injection) it can take several months for their fertility to return to normal (Kaplan et al., 2005),

but generally this form of contraception does not have a deleterious effect on long-term capability to become pregnant (Mikkelsen et al., 2013). Additionally, individuals and couples may meet the medical criteria for infertility despite having no desire or intentions to have biological children (Greil & McQuillan, 2010).

There also appear to be inconsistencies in definitions of infertility used across various disciplines (Johnson et al., 2018). A systematic review of the literature on prevalence studies measuring infertility highlighted the lack of consistency in definitions (Gurunath et al., 2011). For example, some demographers were found to define infertility as the inability of a sexually active woman who is not using contraception to have a live birth (Larsen, 2005), while clinical definitions were found to be oriented more toward the early detection of infertility and application of treatment as early as possible (Gurunath et al., 2011). Furthermore, infertility is used often synonymously with terms like sterility, infecundity, childlessness, and subfertility (Gurunath et al., 2011; Mascarenhas, Cheung, Mathers, & Stevens, 2012). Sterility and infecundity for women has been defined as the inability to conceive a pregnancy (Mascarenhas et al., 2012), while subfertility generally describes any form of reduced fertility with prolonged time of unwanted non-conception (Gnoth et al., 2005). The primary drawback to such inconsistency among definitions of infertility is the difficulty it creates in attempts to estimate the prevalence of this issue, which leads to difficulties in attempts to address individual and global concerns. At the individual level, there may be concerns related to access to treatment, such as the timing (i.e., the age to access or when treatment is less effective). At the population level, the impact of infertility ranges from changes in demographic milestones (Lutz & Skirbekk, 2005) to social and economic consequences (Wolf, Lee, Miller, Donehower, & Genest, 2011), to health disparities (Bitler & Schmidt, 2006).

The issue of defining infertility can also be problematic in that not everyone aligns with the common medical definitions. For example, some people may not view themselves as “biologically infertile” until they define the state of childlessness as a problem (i.e., they feel socially pressured to have children; Greil et al., 2011; Johnson et al., 2014; Leyser-Whalen et al., 2018). Others may self-identify as “infertile” but do not meet the medical criteria (Greil et al., 2011; Leyser-Whalen et al., 2018). As well, not all individuals who are medically defined as “infertile” necessarily perceive it as a problem (Greil et al., 2011; Leyser-Whalen et al., 2018) nor wish to have children one day (Letherby, 2002). Some people could also be considered both

“infertile” and “involuntarily childless” (e.g., a medically infertile woman who is not mothering any children within a social relationship) (Letherby, 2002). Further, the heteronormative lens of biomedical definitions of infertility negates the experience of individuals from the LGBTQ community (Maxwell et al., 2018; Rogalin & Brooks, 2018). Overall, these examples highlight the fact that not all involuntarily childless people are necessarily infertile, fertility appears to be on a continuum rather than a fixed, definitive state (Letherby, 2002; Greil et al., 2010, 2011; Bell, 2013), and

In addition to the various definitions of infertility, there is another conceptual issue to consider: is infertility a disease? Some researchers have posited that reproduction is one of the systems required for the normal functioning of the human body, so any abnormality in the functioning of the reproductive system could constitute a disease (Moulet, 2005; Palha & Lourenco, 2011). However, others have argued that infertility is not a disease, despite generally being defined and treated like one in the health care system, and that the term involuntary childlessness can more accurately describe peoples’ experience (Becker & Nachtigall, 1992; Moulet, 2005; Bell, 2013). An example to highlight this issue is the case of women who are unable to naturally conceive due to maternal aging. As previously noted, fertility begins to naturally decline for most women starting at around 28 years of age, with the decline progressing rapidly after age 35 (Virtala et al., 2011; Peterson et al., 2012). In this situation, they are not experiencing a disease, but rather a natural decline in fertility – something that is common to almost all women (and for men at later ages), and thus not abnormal. Involuntary childlessness is one phenomenon that has shifted from being a private problem of couples and individuals to being a medical condition (Bell, 2009; Greil et al., 2010; Greil et al., 2011; Thompson, 2005). Medicalization is a term often used to denote the process by which certain behaviours come to be understood as questions of health and illness, and therefore subject to the authority of medical institutions (Greil et al., 2011). Much of the social science literature of the 1960s and 1970s focused on the problem of “involuntary childlessness” – a social condition that was defined by the unwanted absence of children (Becker & Nachtigall, 1992). The shift from viewing unwanted childlessness as a social problem to a medical problem led to the replacement of words, involuntary childlessness, by the word, infertility, reflecting a discourse which was becoming dominated by biomedicine (Becker & Nachtigall, 1992). The changing focus from involuntary childlessness to infertility also occurred in tandem with the increased medical emphasis on

infertility, increasing numbers of physicians specializing in reproductive endocrinology (i.e., specialty in infertility and reproductive medicine), an escalation of research on infertility, the development of reproductive technology, as well as with more people delaying childbearing and seeking medical treatment (Becker & Nachtigall, 1992; Greil & McQuillan, 2010).

Medicalization is sometimes thought to improve the status of persons who have conditions that are considered ambiguous, deviant, or marginal to social norms and expectations (Becker & Nachtigall, 1992; Blackburn, 2011; Conrad, 2007; Arunima & Kohli, 2012). This is achieved by providing biological and/or genetic explanations that attribute less responsibility for the condition to the individual than may have been associated with previous explanations (i.e., the individual's behaviour led to the development of the condition). Relegating a condition such as involuntary childlessness to the healthcare system and referring to it as infertility was one way of potentially reducing the difference from the norm and deviant status of this issue (Becker & Nachtigall, 1992). Scholars, including Bell (2013), Becker and Nachtigall (1992), and Greil and colleagues (2010, 2011), though, have argued that the current dominant construction of infertility as a biomedical issue and disease should be replaced with the pre-medicalized, more inclusive term, involuntary childlessness, where this condition is seen as one that affects people in multidimensional ways (Bell, 2013). Specifically, they argue that while the cause of infertility may be physically or biologically based (i.e., endometriosis or blocked fallopian tubes), the experience can also be understood in terms of the personal and social repercussions which can accompany this state, such as distress and stigma, and so the term involuntary childlessness is considered more appropriate (Becker & Nachtigall, 1992; Greil et al., 2010, 2011; Bell, 2013). However, this grouping and labelling may be problematic in that the nuances in experiences of the various pathways and forms of childlessness could be lost and people who experience medical issues relating to their fertility may not be able to access or receive financial support for treatments.

As with other modes of childlessness, providing accurate estimates of the prevalence rates of infertility is difficult, mainly since the reported rates strongly depend on the definitions used. As a result, worldwide incidence of infertility estimates can vary. Some researchers have reported that approximately 8 to 12% of couples with women of childbearing age are biologically infertile, affecting between 50 and 80 million people (Aleyamma, Kamath, Muthukumar, Mangalaraj, & George, 2011; Greil et al., 2011; Centers for Disease Control &

Prevention, 2013; Petraglia, Serour, & Chapron, 2013; Thoma et al., 2013). The most current estimate of the prevalence of infertility in Canada for heterosexual couples with female partners aged 18-44 years ranges from 11.5% to 15.7% (Bushnick et al., 2012). Some experts believe that infertility rates are on the rise in industrialized countries like Canada because more individuals are delaying childbearing, putting them at a greater risk for difficulties with natural conception. While more individuals are postponing the age at which they have their first biological child (Peterson et al., 2012; Milan, 2013), there is debate regarding the current rates of infertility in Canada and around the world. While there is evidence that infertility rates are increasing (Bushnick et al., 2012; Petraglia et al., 2013), other studies suggest that rates are stable or declining (Boivin et al., 2007; Mascarenhas et al., 2012). Others suggest that individuals who meet the medical criteria for infertility are best described as experiencing subfecundity which does not indicate permanent childlessness (Shreffler, Tiemeyer, Dorius, Spierling, Greil, & McQuillan, 2016). Some commentators dispute the claims that infertility rates are increasing by providing evidence that media sources (e.g., newspapers, websites, television, and radio) have exaggerated the issue (Sangster & Lawson, 2014) and that fertility clinics are mainly concerned with selling ART (Hawkins, 2012). For example, Sangster and Lawson (2014) concluded that the portrayal of infertility, particularly in Canadian print news media, appears to adhere to a biomedical construction and frames it as an increasingly alarming issue.

1.3 The Distress of Involuntary Childlessness

Despite the debate regarding infertility and involuntary childlessness as well as the challenges with accurately reporting the prevalence of individuals experiencing these states, there is little debate that the experience of not being able to have a biological child when one is desired can be quite distressing (Greil et al., 2010; Johnson & Fledderjohan, 2012; Peloquin & Brassard, 2013). Involuntary childlessness has even been described as one of the most distressing life crises for individuals who experience and identify with this condition (Blyth & Moore, 2001; Fekkes et al., 2003; Greil et al., 2011). Involuntary childlessness has been consistently associated with decreased scores in several quality of life (QOL) domains, including mental health, vitality, emotional behaviours, psychological, environmental, physical functioning, and social functioning (Lau et al., 2008; Drosdzol & Skyrzpulec, 2009). Some of the commonly reported consequences for people who experience involuntary childlessness include: depression; anxiety; sexual anxiety/difficulty; relationship problems with partner, family, and friends; an increased

sense of self-blame, guilt (Baker, 2003; Cousineau & Domar, 2007; Peterson, Pirritano, Christensen, & Schmidt, 2008; Volgsten, Skoog-Svanberg, Ekselius, Lundkvist, & Sundstrom-Poromaa, 2008; Peterson & Engwall, 2013; Zurlo, Volta, & Vallone, 2017); feelings of grief, loss, and despair (Koert & Daniluk, 2017); hopelessness (Filleto & Makuch, 2005); low self-esteem and feelings of loss of control (Cavdar & Coskun, 2018); social withdrawal (Onat & Beji, 2012; Walsh, 2012; Malik & Coulson, 2013); feeling like less of a man or a woman (Clarke et al., 2006; Peloquin & Brassard, 2013); and, a sense of injustice (Koert & Daniluk, 2017). In many cases, the individual impacts are often compounded by reported social repercussions. For example, many individuals have stated that the experience of involuntary childlessness can result in divorce, loss of economic resources, social stigma (van Balen & Inhorn, 2002; Hollos, 2003; Greil, Saluson-Blevins, & McQuillan, 2010; Eftekhar-Ardabily, Behboodi-Moghadam, Salsali, Ramzanazadeh, & Nedjat, 2011; Rich et al., 2011) and ostracism/social isolation (Runganga, Sundby, & Aggleton, 2001; Baker, 2003; Bell, 2012; Walsh, 2012; Koert & Daniluk, 2017). In some contexts, not being able to have biological children can also be perceived as a sign of diminished status, defectiveness, reduced competence (Greil, 1997), and can even lead to violence and community exile (Hollos, 2003; van Balen & Inhorn, 2002; Araoye, 2003; Rutstein & Shah, 2004; Eftekhar-Ardabily et al., 2011). Some individuals have also reported receiving contradictory reactions, whereby people reprimand them for being childless and failing to achieve parenthood status while also scrutinizing them for their “obsessive” desire to have children (Ulrich & Weatherall, 2000). Others have reported being stereotyped as suffering, desperate, and victimized by their involuntarily childless state (Bartlett, 1996; Letherby, 2002).

While there are many men and women who desire children that have reported experiencing considerable psychological distress when faced with reproductive shortcomings (Greil, McQuillan, Johnson, Slauson-Blevins, & Shreffler, 2009; Greil, Slauson-Blevins, & McQuillan, 2010; Wichman, Ehlers, Wichman, Weaver, & Coddington, 2011), the experience of involuntary childlessness is often reported as disproportionately affecting women (Chachamovich et al., 2010; Galhardo, Pinto-Gouveia, Cunha, & Matos, 2011; Wichman et al., 2011; Bell, 2013; Huppelschoten et al., 2013; Peloquin & Brassard, 2013; Peterson et al., 2014) and involuntary childlessness has been described predominantly as a “woman’s problem” (Inhorn, 2003; Dyer et al., 2004; Inhorn & Patrizio, 2015). Some research suggests that women faced with infertility experience more shock, denial, grief, anxiety, and depression as well as

greater decreases in self-esteem compared to men (Peloquin & Brassard, 2013; Wischmann & Thorn, 2013). Other evidence suggests that men are just as negatively affected by their childless state and are more likely than women to report feelings of anger, isolation, and a feeling of personal failure when dealing with infertility (Petok, 2006). Some also view male-factor infertility as a threat to their masculinity and sexual potency (Keylor & Apfel, 2010; Mikkelsen, Madsen, & Humaidan, 2012; Hinton & Miller, 2013), often resulting in some men experiencing episodes of impotence and sexual performance anxiety (Saleh, Ranga, Raina, Nelson, & Agarwal, 2003), as well as emotional stress and marital difficulties (Beutel et al., 1999). Overall though, the psychosocial consequences and experiences of infertility for men are less well understood than for women (Greil et al., 2010; Fisher & Hammarberg, 2012; Joja, Dinu, & Paun, 2015; Arya & Dibb, 2016; Hammarberg et al., 2017), largely because infertility is perceived by many men as highly stigmatizing which results in them rarely disclosing their diagnosis or discussing how they feel (Dooley, Nolan, & Sarma, 2011; Wischmann & Thorn, 2013). Contrary to common beliefs, many men desire parenthood as much as women (Fisher et al., 2010; Hammarberg et al., 2017), and men who remain childless have also been found to have poorer mental health outcomes than men who become fathers (Fisher et al., 2010; Klemetti, Raitanen, Sihvo, Saarni, & Koponen, 2010; Hadley & Hanley, 2011; Fisher & Hammarberg, 2012; Wischmann & Thorn, 2013).

It has been suggested that the reported differences in responses of men and women to involuntary childlessness are best interpreted through an “understanding of broader gender differences in reactions to stress, emotional distress, and grief rather than reactions to specific infertility” (Wischmann & Thorn, 2013). For example, men and women may respond differently to infertility because they have been taught distinct ways of coping with negative affect and distress (Webb & Daniluk, 1999), whereby men are often taught to adopt a passive coping style and suppress their emotions or withdraw from external contacts and fixation of children (Cousineau & Domar, 2007; Lechner, Bolman, & Van Dalen, 2007; Jaffe & Diamond, 2010; Hudson & Culley, 2013), while women are encouraged to adopt an active coping style and express their emotions, seek contact with fellow sufferers, and find a new alternative meaning in life to replace the desire for a child (Lechner, Bolman, & Van Dalen, 2007; Jaffe & Diamond, 2010). There are a variety of societal expectations assigned to each gender and roles they are expected to enact, many of which appear to be nearly universal. Particularly in Westernized

countries such as Canada and the United States, men have traditionally been expected to be strong, agentic, forceful, independent, analytical, dominant, and aggressive – characteristics well-suited to thrive in the workforce (West & Zimmerman, 1987). Women on the other hand have been expected to be warm, sensitive, gentle, soft-spoken, caring, compassionate, and motherly, making them more suited to a life caring for children (West & Zimmerman, 1987). While gender roles have changed in Canada and the U.S. since the beginning/middle of the 20th century, whereby more women have entered the workforce and more men are involved in childcare, the expectations placed on women to become mothers and be the primary caregiver does not appear to have waned (Slaughter, 2015). We have yet to see a complete “flip” whereby most men take on the primary caregiver role, leaving many women with the responsibility of balancing both work and parenting responsibilities (Reed, 2012; Slaughter, 2015). Further, men and women are still largely expected to adhere to traditional social norms related to their gender and face social sanctions if they fail to do so (Rudman & Fairchild, 2004; Moss-Racusin, Phelan, & Rudman, 2009).

Another potential reason for the discrepancy in the experience of involuntary childlessness for men and women is the fact that because conception plays out through women’s bodies via pregnancy, all women can potentially embody the issue of biological childlessness (Greil et al., 1988; Clarke et al., 2006). This attribution is also echoed in the medicalization of infertility (Greil, 1991; van Balen & Inhorn, 2002) and the currently limited realm of assisted reproductive technology where the “patient” is most often the woman, regardless of the etiology of involuntary childlessness (e.g., lack of suitable partner; natural fertility decline due to delayed childbearing; male-factor infertility stemming from low sperm count; female-factor infertility stemming from poor egg quality) (Throsby & Gill, 2004; Greil et al., 2010; Bell, 2013).

However, a more common explanation put forth is related to the gendered, socio-cultural context: the identity and social status of women is more closely tied to childbearing and motherhood (Parry, 2005; Clarke et al., 2006; Fisher & Hammarberg, 2012), whereas men are presumed to have more diverse life opportunities than parenthood (Greil, 1997; Fisher & Hammarberg, 2012). Despite the increases in women’s paid employment as well as changes in marriage/partnering practices (i.e., more cohabitation), parenthood (i.e., greater father involvement), and domesticity (i.e., division of household labour) (Maher & Saugeres, 2007), motherhood, womanhood, and femininity are so inextricably entwined to the point where many

researchers and theorists describe them as fundamentally synonymous (Blyth, Burr, & Farrand, 2008; Friedman & Weissbrod, 2005; Greil, McQuillan, & Slauson-Blevins, 2011; Ulrich & Wetherall, 2000). Historically, motherhood has been considered an imperative, and often the primary, social role for women (Gillespie, 2000; Tietjens-Meyers, 2001; Letherby, 2002; Blyth, Burr, & Farrand, 2008). As a result, the failure to have natural-born children was often construed as deviant (Veevers, 1973; Miall, 1986; Menaghan, 1989; Koropecj-Cox, Mehraban-Pienta, & Brown, 2007), and the inability to biologically reproduce represented a failure on the part of women to meet cultural norms (Greil et al., 1988; Nachtigall, Becker, & Wozny, 1992). This concept has been labelled the “motherhood mandate” by researchers such as Russo (1976). However, the motherhood mandate has traditionally not been equally applied to all women, including women of colour (Bell, 2010; Goodwin & Huppatz, 2010a; Rosenthal & Lobel, 2011), lesbian women (Donovan, 2008; Goldberg & Smith, 2008; Weber, 2010; Hicks, 2013; Kazyak, Park, McQuillan, & Greil, 2016; Hayman & Wilkes, 2017), and women with disabilities (Aunos & Feldman, 2002; Feldman, Varghese, Ramsay, & Rajska, 2002; Kroese, Hussein, Clifford, & Ahmed, 2002; McKeever, Angus, Lee-Miller, & Reid, 2003; Prilleltensky, 2004; Elvish, Hames, English, & Wills, 2006).

In addition to traditional gender roles, the root of the belief that womanhood equates to motherhood can be partially attributed to pronatalist ideology. Pronatalism, or a pro-birth position, can be defined as the policy or practice of encouraging the bearing of children, often for the purposes of increasing birthrates within a country or region or a pro-birth attitude or policy which encourages reproduction and reveres the role of parenthood (Heitlinger, 1991; Meyers, 2002; Carroll, 2012; Bell, 2013). Pronatalism also embodies the beliefs, attitudes, and actions that, implicitly or explicitly, suggest a woman’s social value and primary social role is linked to being a mother (Parry, 2005; Park, 2005; Rich, Taket, Graham & Shelley, 2011; Reed, 2012; Bell, 2013). While men may also experience pronatalist pressures, it is much less pronounced than those placed on women (Remennick, 2000; Parry, 2005). Cultural discourses of femininity which state that motherhood and womanhood are synonymous are said to contribute to women worldwide reporting feeling pressured to have children (Dyer et al., 2004; Koert, 2014; Remennick, 2000; Rich et al., 2011; Slauson-Blevins, 2011). There are also several assumptions underlying pronatalism, including that pregnancy and motherhood are desirable, easy, and natural to achieve for women (Remennick, 2000; Parry, 2005). So, for those women who desire

children, but face difficulties in conceiving such external pressures may compound the negative feelings they often already experience. Insensitive comments from significant and general others as well as unsolicited advice on how to get pregnant are some of the immediate ways in which women can feel pressured (Parry, 2005).

Beyond influencing people at individual and social network levels, Heitlinger (1991) outlined how pronatalism operates in several other ways: culturally when motherhood is perceived as “natural” and central to a woman’s identity; ideologically, when the motherhood mandate becomes a patriotic, ethnic, or eugenic obligation; psychologically, when childbearing is considered a personal aspiration and decision for individuals and couples; on the cohort level, when birth rate changes are related to the size of successive generations; and on the level of public policy, when states intervene in an attempt to regulate the dynamics of fertility and to influence its causes and consequences. At the national level, pronatalism manifests primarily through government policy (Anderson, 2007; Childs & Barkin, 2006; Parry, 2005; Rivkin-Fish, 2010; Malak, Rahman, & Yip, 2016). Pronatalist ideology has been recognized as a prominent characteristic of most regions in the world, including western countries like the United States, and Australia (Ulrich & Weatherall, 2000). For example, the Australian government issued new pronatalist incentives starting in 2001, including family-friendly tax incentives and a lump sum Baby Bonus (i.e., a lump sum of money paid directly to mothers for each newborn) (Anderson, 2007). Similar incentives have been provided in Israel, an intensely pronatalist society, where state subsidies for in vitro fertilization (IVF) and surrogacy have been provided (Greil et al., 2011).

Is Canada a pronatalist society? At the political level, Canada has generally postured as a pronatalist nation. This is evident when we examine the pro-family policies which have been implemented in the past (e.g., Allowance for Newborn Children in 1988 in Quebec; Milligan, 2005; Institute of Marriage and Family Canada, 2010) and the more recent pro-family tax benefits which were introduced (LaPlante, Morency, & Street, 2015; McInturff & MacDonald, 2015). These include direct income transfers, tax credits, and joint taxation. Some examples include: the Canada Child Tax Benefit (CCTB) program which has provided direct payment to qualified families with children under the age of 18; the National Child Benefit Supplement (NCBS) which is an income transfer targeted specifically to low-income families; the children’s arts tax credit and the children’s fitness tax credit which allow parents to claim 15% non-

refundable tax credit for fees paid for eligible sports and arts activities; and the Universal Child Care Benefit (UCCB), a taxable allowance of up to \$1800 per year for families with children under the age of 6; and the Canada Child Benefit, which replaced the UCCB and CCTB in 2016, and provides a maximum annual benefit of \$6,400 per child under the age of 6 and \$5,400 per child ages 6 through 17 years (LaPlante et al., 2015; McInturff & MacDonald, 2015; Government of Canada, 2018). However, it is unclear whether these “subtle” messages put forth by the government have an impact on the viewpoints of the Canadian public and whether Canada is pronatalist. The fact that the federal government does not ensure either access or availability of early childhood education and care (ECEC) programs as evidenced by the low childcare budgets (Drury, 2017) also makes it difficult to draw conclusions about the strength of pronatalist ideology among the public.

To answer the question of whether the general Canadian population endorses pronatalist ideology (perhaps because of the influence of government policies) there are additional variables to examine. First, are there personal and societal benefits to having children? We are already aware of the tax benefits at the government level, but what about among the public? How are people without children viewed? Second, is there social censure with respect to not having children? If yes, what is the extent of the censure? To examine whether and where censure exists and to what degree, we also need to determine overall if having children is considered normative. What might be the actual or perceived social punishments or sanctioning for violating the norm of having children? Individuals without children often report feeling stigmatized for their childless/childfree state. To what extent does their perceived stigma relate to actual judgments and discrimination?

1.4 Explaining the Stigma of Childlessness: Deviance, Stigma, and Prejudice

Deviant behaviour is generally defined as behaviour which violates social norms. A deviant individual is marked as a person who is a norm breaker and violates the norms or rules set within a society or group (Thio, Calhoun, & Conyers, 2013). Stigma is a primary component to understanding deviance. The term stigma was first introduced in ancient Greece and referred to marks which were cut or burnt into the body and designed to expose negative attributes about the moral status of the bearer of these marks (Goffman, 1963). The marks made it clear to others that the individual was flawed and should be avoided. Goffman is credited with developing the first, more nuanced definition and theory of stigma. According to him, stigma refers to an

attribute that is deeply discrediting (i.e., deviance) and experienced by individuals who are different from the norm in society or possess an undesirable attribute (Goffman, 1963). “Marks” which are stigmatizing may be visible or invisible, controllable or uncontrollable, and linked to appearance (e.g., a physical deformity), behaviour (e.g., child abuser), or group membership (e.g., LGBTQ community). Jones and colleagues (1984) extended Goffman’s categorizations and proposed six dimensions of stigma: 1) concealability, or how noticeable a characteristic is to others; 2) course, or whether the characteristic is life-long or reversible; 3) disruptiveness, or how much the characteristic impacts interpersonal relationships; 4) aesthetics, or whether the mark is perceived as disgusting or unattractive; 5) origin of the characteristic, particularly whether an individual is perceived as responsible for it; and 6) peril, or induced feelings of threat or danger to others. Goffman (1963) viewed stigma as not merely a physical mark, but rather an attribute which results in social disapproval, negative evaluations, prejudice, and stereotypes. Ultimately, stigma makes people or groups less desirable and different from others considered to be “normal” or who do not carry the stigma (Goffman, 1963, p. 5) and become the basis for excluding or avoiding members of the group (Major & Eccleston, 2004).

Reactions to an individual or group with a known or identifiable stigma can be implicit and manifest as non-verbal expressions of discomfort (e.g., avoiding eye contact) resulting in tense social interactions between stigmatized and non-stigmatized individuals (Hebl, Tickle, & Heatherton, 2000). It can also be used for the purposes of exploitation and domination. For example, more powerful groups may stigmatize less powerful groups to maintain the status quo of inequality. A common structural example includes gender: women have been objectified, devalued, and experienced gender inequality in the social and economic system (Friedan, 1963; Smith, Mysak, & Michael, 2008; Stewart, Sherry, Watt, Grant, & Hadjistavropoulos, 2008). Another function is social norm enforcement, whereby the threat of stigmatization will encourage deviants to conform to in-group norms. We can see evidence of this function of stigma when considering the treatment of criminals in our society; in addition to avoiding the legal punishments, individuals are motivated to avoid the social punishments. Stigma can also be used for the purposes of disease avoidance. Social exclusion of individuals with serious illnesses [e.g., leprosy, human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS)] has been justified to protect against infectious diseases and improve chances of survival (Kurzban & Leary, 2001; Phelan, Link, & Dovidio, 2008). While stigmatized groups

may be able to adopt a variety of coping strategies to mitigate the negative psychological and social impact of stigmatization (Bos et al., 2013), decreases in the psychological well-being of stigmatized individuals resulting from stigma have been well-documented (Meyer, 2003; Stutterheim et al., 2009). Many stigmatized individuals experience depression, anxiety, isolation, reduced social network, and limited social support (Bos et al., 2013).

There are a variety of specific forms of, or reactions to, stigma which have been outlined in the literature. *Public stigma*, for example, represents the social and psychological reactions of (often negative), or cognitive representations held by the public (perceivers) to a person or group perceived to have a stigmatized condition (Herek, 2007, 2009; Pryor & Reeder, 2011; Bos et al., 2013). Cognitive representations or features of a stigmatized condition can subsequently trigger affective and behavioural reactions toward a stigmatized person or group (Weiner, Perry, & Magnusson, 1988; Dijker & Koomen, 2003; Bos et al., 2013). There are four types of representations which can trigger these reactions (Bos et al., 2013). The first is the level of personal control a person has over their stigmatized condition. Individuals attributed high levels of personal responsibility for the onset of their condition evoke negative affective reactions and social censure, whereas individuals who are perceived as less personally responsible for their difficulties yield positive affective reactions and social facilitation (Weiner et al., 1988). The second representation is perceived severity of the condition. Conditions perceived to be highly severe can evoke feelings of anxiety and sympathy (Feldman & Crandall, 2007; Van Alphen, Dijker, Bos, Van den Borne & Curfs, 2012), which can lead to emotional ambivalence and awkward interactions (Katz, 1981; Hebl, Tickle, & Heatherton, 2000; Dijker & Koomen, 2003). The third representation is perceived dangerousness of a condition, where the assumption of danger can elicit fear and avoidance (Bos, Kok & Dijker, 2001; Feldman & Crandall, 2007). The final representation is perception of norm violation, where perceived violations can trigger anger, lack of sympathy, and subsequently social exclusion (Dijker & Koomen, 2003). Individuals who possess a stigmatized condition can be impacted by public stigma in a few ways: 1) through negative treatment/discrimination or *enacted/experienced stigma*; 2) through the experience or anticipation of being stigmatized – *perceived/felt stigma*; and 3) through psychological distress and a reduction in self-worth, or *internalized/self-stigma* (Herek, 2007, 2009). Van Brakel and colleagues (2006) originally conceptualized felt stigma as encompassing feelings of shame associated with the stigmatizing mark, in addition to fear of enacted stigma, while Brohan, Slade,

Clement, and Thornicroft (2010) suggested that felt stigma encompasses aspects of both perceived and self-stigma and that feelings of shame are best included under self-stigma rather than perceived/felt. Further, LeBel (2008) posited that perceived stigma is a product of: 1) what someone thinks most others believe about the stigmatized group; and 2) how someone thinks society views them personally as a member of the stigmatized group.

Corrigan and Watson (2002) also distinguished between public and self-stigma, and further broke down stigma into stereotypes, prejudice, and discrimination, while Thornicroft, Rose, Kassam, and Sartorius (2007) defined stigma as: 1) a problem of knowledge (ignorance/misinformation); 2) problems of attitudes (prejudice); and 3) problems of behaviour (discrimination). Prejudice has been defined as negative affective, or evaluative, responses towards social groups or individual members within the group (Allport, 1954; Dixon, Levine, Reicher, & Durrheim, 2012), and is thought to be distinct from stigma, but related (Phelan et al., 2008). Prejudice has also been conceptualized as a negative attitude with three distinct components: cognitive component (e.g., beliefs about a group), affective component (e.g., positive or negative reactions), and conative component (e.g., behavioural predisposition to behave negatively toward a group) (Dovidio, Hewstone, Glick, & Esses, 2010). More current prejudice research tends to focus on the processes driven by intergroup domination and exploitation (e.g., ethnicity), while current stigma research is more concerned with processes driven by norm enforcement (e.g., deviant identity or behaviour) and disease avoidance (i.e., illness or disabilities; Phelan et al., 2008). Stigma has been studied within the context of alcoholics (Link, Struening, Rahav, Phelan, & Nuttbrock, 1997), homosexuality (McWhinney, 1995), non-traditional families (Bouichard & Lachance-Grzela, 2016), the elderly (Kawakami, Young, & Dovidio, 2002), racial minority groups (Raman, 2016), medically obese individuals (Latner & Stunkard, 2003), people with mental health issues (Hinshaw, 2005), and women (Smith, Mysak, & Michael, 2008). While there are differences in focus, some researchers have questioned whether there is a fundamental difference between the concepts of stigma and prejudice. Some have suggested that negative reactions to stigmatized people can represent a form of prejudice (Corrigan, 2004). Others say that stigma can be differentiated from prejudice because stigma specifically involves reactions to perceived negative deviance, whereas prejudice does not necessarily connote a reaction to deviance per se (Bos et al., 2013).

1.4.1 Explicit stigma: Linking stigma and stereotypes. In their 2005 publication *The Social Psychology of Stigma*, Major and O'Brien outline several mechanisms to explain how stigma can affect stigmatized groups, including negative treatment, discrimination, expectancy confirmation processes (i.e., self-fulfilling prophecies), and identity threat processes (i.e., threats to social identity and self-esteem). Another way in which stigma can impact groups is through automatic activation of stereotypes (Herek, 1999; Dovidio et al, 2000; Major & O'Brien, 2005). Stereotypes have been described in various ways since Lippmann (1922) first coined the term, which he defined as a typical picture associated with a social group. Secord and Backman (1964) distinguished between two types of stereotypes: self/personal stereotypes, which may characterize a single individual's opinions, and social/cultural stereotypes which may represent the consensus of most of the given population. Self-stereotypes are the result of groups ascribing traits to others as they would to themselves and assuming that others are just like them (Stewart, Powell, & Chetwynd, 1979). On the other hand, social or cultural stereotypes can be understood as generalized expectations about or judgements of others (Stewart et al., 1979; Ashmore & Del Boca, 1981; Tajfel, 1981; Judd & Park, 1993).

More generally, stereotypes are understood as beliefs or generalizations about the characteristics of group members (Allport, 1954; Ashmore & Del Boca, 1981; Oakes & Turner, 1990; Dovidio et al., 2000; Lyons & Kashima, 2001; Stangor, 2009) as well as the theories about why those attributes are associated with that group (Hilton & von Hippel, 1996; Van Brakel, 2006). Stereotypes can also provide information about social roles, anticipated behaviour of group members in new situations, the degree to which members of a group are similar (i.e., within-group homogeneity), and the emotional reactions elicited by group members (Oakes & Turner, 1990; Dovidio et al., 2000). Stereotypes can be created after multiple, similar interactions with a group (Keene, 2011) or learned socially (Brown, 1986), and the origin and form of stereotypes can fluctuate greatly over time and region (Bigler & Liben, 2006).

At its base level, *perception* is a psychological process that involves the way in which we see the world around us and try to make sense of it (Mills, Helms Mills, Bratton, & Forshaw, 2007). *Interpersonal perception* represents situations where individuals judge other individuals who may also judge them, while *social perception* entails judging social stimuli (Lee, Albright, & Malloy, 2001). Stereotyping is considered by some as a form of social perception, where a person is judged on their category membership and not necessarily their behaviour (Lee, et al.,

2001). Stereotyping can also be classified as a barrier to perception, since it involves making assumptions about people based solely on gross generalizations about groups they are a part of (Mills et al., 2007). Early researchers classified stereotyping as an inflexible, faulty thought process, whereas more recent scholars highlight the functional and dynamic components of stereotypes (Dovidio et al., 2000). Some researchers have conceptualized stereotypes as cognitive schemas which allow people to process information and simplify a complex environment (Brewer, 1988; Fiske & Neuberg, 1990; Hilton & von Hippel, 1996). Because the human brain is limited by its capacity to attend to, perceive, and recall information, we are not always able to fully process social information. As such, stereotypes can help ease the burden placed on our brains by providing heuristics about attributes that people in a social group may possess (Tobena, Marks, & Dar, 1999; Buchanan & Huczynski, 2004; Martin et al., 2014). While not always accurate (Devine, 1989; Madon et al., 2001) stereotypes can be valuable in that they provide rapid and efficient access to information stored in our brains whenever a particular social category is presented (Tobena et al., 1999; Macrae & Bodenhausen, 2000).

Further, despite its functionality, stereotyping can be problematic in that it is frequently accompanied by bias, prejudicial judgements, or discrimination (Allport, 1954; Van Langenhove & Harre, 1994; Bigler & Liben, 2006; Mills et al., 2007). When stimuli or groups are categorized into stereotypes, they can be simplified, distorted (Van Langenhove & Harre, 1994), and highlight negative characteristics of groups (Stangor, 2009). However, not all stereotypes are inherently negative and alike. For example, within North American society some stereotyped groups are considered incapable and useless (e.g., elderly and disabled people), while others are respected and seen as highly competent, but are also viewed as a source of competition by the dominant society (e.g., Asians) (Fiske et al., 2002). On the other hand, some groups are likable, sweet, and harmless (e.g., housewives), while others are disliked and viewed as cold and inhuman (e.g., rich/wealthy people). Despite the potentially good intentions, expressing “positive” stereotypes are not always seen positively, mainly because the oversimplification and overgeneralization of groups (whether in positive or negative light) places assumptions on people that are not always accurate (Stangor, 2009). One theory that has been widely used to examine the positive and negative stereotypes of groups is the Stereotype Content Model.

1.4.2 Stereotype Content Model. The Stereotype Content Model (SCM) highlights both the positive and negative features of stereotypes and distinguishes groups along two core

dimensions: competence and warmth (Fiske et al., 2002; Fiske, 2018). Competence refers to a group's perceived ability to be successful at tasks and is generally associated with high-status/prestigious groups and denied to lower-status groups (Dovidio et al., 2000; Eckes, 2002; Fiske et al., 2002; Cuddy et al., 2009). Warmth, on the other hand, refers to a group's socioemotional orientation as well as intentions to harm or threaten "in-groups" and is associated with "cooperative" groups and denied to low-status groups (Dovidio et al., 2000; Eckes, 2002). Assessment of groups on these variables (high/low competence and high/low warmth) results in four distinct stereotype categories: admiration (high/high), paternalistic (low competence/high warmth), contemptuous (low/low), and envious (high competence/low warmth) (Figure 1.1). Subsequently, each warmth-competence category elicits accompanying emotions: admiration, contempt, envy, or pity (Fiske et al., 2002). Within this model, stereotypes also encompass the concepts of status and competition, which intersect with competence and warmth: those with higher status should be considered more competent, while those who appear as more competitive with the main "in-group" will be viewed as low in warmth (Cuddy et al., 2009). According to the SCM's ambivalent stereotypes hypothesis, a variety of social groups may be labelled as proficient in one sphere (i.e., competence or warmth), and subsequently inferior in the other (Cuddy et al., 2009). The off-diagonal combinations outlined in the SCM model represent these ambivalent/mixed groups. Prejudice has generally been conceived as one-dimensional antipathy where in-groups are loved, and out-groups hated (Allport, 1954; Crosby, Bromley, & Saxe, 1980). However, the mixed-valence warmth and competence stereotypes can elicit mixed-valence patterns of prejudice (Cuddy, Fiske, & Glick, 2004). For example, groups might receive respect for their high level of competence, but are disliked for their low levels of warmth (Cuddy et al., 2004; Cuddy et al., 2009).

Figure 1.1 Stereotype Content Model (SCM) (recreated from Fiske et al., 2002)

Warmth	Competence	
	Low	High
High	Quadrant 2 Paternalistic prejudice low status, not competitive pity, sympathy e.g., elderly and disabled people, housewives	Quadrant 1 Admiration high status, not competitive pride, admiration e.g., in-group, close allies
Low	Quadrant 3 Contemptuous prejudice low status, competitive contempt, disgust, anger, resentment e.g., welfare recipients, poor people	Quadrant 4 Envious prejudice high status, competitive envy, jealousy e.g., rich people, feminists

Groups rated as high on both warmth and competence (Quadrant 1 in Figure 1) are those considered in- or reference- groups (i.e., friends and allies) who tend to elicit feelings of pride and admiration and are seen as deserving of help, protection and facilitation, because they are viewed as responsible for their positive outcomes (Weiner, 1985; Fiske, 2012). Groups considered low on competence, but high on warmth (Quadrant 2 in Figure 1) tend to elicit pity, a paternalistic response (Cuddy et al., 2004; Fiske, 2012). Pity is generally attributed to people whose unfortunate situation is viewed as uncontrollable (Weiner, 1985; Weiner, Perry, & Magnusson, 1988). As such, these groups often receive help and protection, but also neglect and demeaning reactions (Fiske, 2012). Past research has situated social groups such as elderly and disabled people into this quadrant (Cuddy et al., 2004; Fiske, 2012). Groups stereotyped as low on both competence and warmth (Quadrant 3 in Figure 1) represent the traditional form of antipathy associated with stigmatized groups who generate disgust, anger, and resentment and are seen as cold, incapable, untrustworthy, and unfriendly. Poor people, individuals on welfare, drug addicts, generic immigrants, and the homeless have all been found in past research to trigger these feelings and become the recipients of attacks, harm, and neglect especially when

their negative outcomes are perceived by others as avoidable and the result of personal actions/decisions/ choices (Weiner, 1985; Fiske, 2012). Finally, groups stereotyped as low on warmth but high on competence (Quadrant 4 in Figure 1) tend to be viewed as worthy of respect and in control of their social standing, but are not well liked (Cuddy et al., 2004; Cuddy et al., 2009). Often they are viewed as exploitative and non-communal (Cuddy et al., 2004; Fiske, 2012). These groups also tend to evoke envy and their competence is viewed as threatening, which in turn can trigger both hostility and depression, and views that their social positions in life are unfair (Smith, Parrott, Ozer, & Moniz, 1994; Glick & Fiske, 2001a, 2001b; Fiske et al., 2002; Glick, 2002). Past research has found that female professionals, gay activists, rich people, and business people tend to fall into this quadrant (Cuddy et al., 2004; Cuddy et al., 2009).

Overall, the SCM has been replicated and supported in several North American (i.e., U.S.) (Fiske et al., 2002; Fiske et al., 1999) and international (Cuddy et al., 2004; Cuddy et al., 2009) samples using various target groups. While this model has not yet been applied to categories of involuntarily childless women, it has been used to examine stereotypes associated with women and childbearing/rearing decisions. Specifically, Cuddy, Fiske, and Glick (2004) measured undergraduate students' perceptions of professional, working mothers compared to professional, working women without children. According to the SCM, mothers tend to fall into either Quadrant 2 (paternalistic) or Quadrant 4 (envious; Figure 1); they may be respected, but not liked or liked but, not respected (Fiske, Xu, Cuddy, & Glick, 1999; Eckes, 2002; Fiske, Cuddy, Glick, & Xu, 2002). For example, homemakers tend to be viewed as lower status and incompetent, while at the same time are considered warm and cooperative (Bridges, Etaugh, & Barnes-Farrell, 2002; Eckes, 2002). On the other hand, female professionals are generally viewed as high-status, competent competitors, but their perceived coldness can evoke feelings of begrudging respect and resentment (Bridges, Etaugh, & Barnes-Farrell, 2002; Eckes, 2002). One aim of the current research is to extend the knowledge in this area by using the SCM framework to explicitly examine the societal perceptions of women who intend to become mothers and are defined by their reproductive/fertility status and determine if there is differential stigma associated with involuntary childlessness.

1.5 The Stigma of Involuntary Childlessness

As childlessness does not conform to social normative expectations, it has resulted in involuntary childless individuals being cast as deviant and devalued within societal contexts

around the globe (Adenike, Wasiu, Sunday, Olanlyan, & Olufemi, 2014; Aseffa, 2011; Slauson-Blevins, 2011; Tao, Rosemary, & Maycock, 2012; Behboodi-Moghadam et al., 2013; Tabong & Adongo, 2013; Sternke & Abrahamson, 2014; Inhorn & Patrizio, 2015). Experiences of and reactions to involuntary childlessness are multi-dimensional and can include ostracism, neglect, marital instability, abuse, loss of social status and security, as well as stigmatization (Hollos & Larsen, 2008; Hollos, Larsen, Obono, & Whitehouse, 2009; Greil et al., 2010; Eftekhar-Ardabili et al., 2011; Rich et al., 2011). In particular, involuntary childlessness has been shown to be highly stigmatizing for women (Slade, O'Neill, Simpson, & Lashen, 2007), largely due to social norms surrounding womanhood and mothering (Remennick, 2000; Park, 2002; Bulcroft & Teachman, 2003; Gillespie, 2003). While studies have found that women are more likely to disclose their fertility difficulties compared to men (Schmidt, Holstein, Christensen, & Boivin, 2005; Slade et al., 2007; Steuber & Solomon, 2008), many women who face difficulty with naturally conceiving report a high degree of secrecy from others due to the fear of stigmatization (Greil, 1991; Steuber & Solomon, 2011). However, because involuntary childlessness is a condition or attribute that is not directly observable (Greil, 1991; Stefan, 2003; Green, Davis, Karschmer, Marsh, & Straight, 2005), individuals facing this condition are at risk for experiencing feelings of distress as well as loss of self-esteem and self-efficacy, largely because they suffer privately (Sternke & Abrahamson, 2014). Further, those who do not disclose their status risk being assumed as voluntarily childless, which can also be highly stigmatizing (Remennick, 2000; Park, 2002; Bulcroft & Teachman, 2003; Gillespie, 2003).

1.5.1 Enacted stigma: Public perceptions of childlessness. Literature on reported public perceptions of childlessness provides insight on both the individual and societal processes related to the stigma of involuntary childlessness (Koropecj-Cox & Pendell, 2007). At the individual level, neutral or positive perceptions about childlessness may help to better our understanding and ability to predict fertility intentions and higher odds of remaining childless, either by choice or through repeated delays of marriage or reproduction (Koropecj-Cox & Pendell, 2007). If individuals believe that they will not face any negative social consequences (e.g., stigma) for delaying or failing to have children they may feel less pressure to procreate. However, if negative attitudes about childlessness predominate this may translate into more normative pressures to bear children or negative biases against those who are childless (Bernardi, 2003; Koropecj-Cox & Pendell, 2007). At the societal level, perceptions about childlessness

may also define the meanings and implications of parenthood and childlessness in the larger society (Koropeckyj-Cox & Pendell, 2007). However, some scholars argue that attitudinal changes may follow rather than precede decisions and behaviours regarding childbearing (Hagewan & Morgan, 2005). Specifically, as more men and women delay marriage and parenthood, their attitudes and fertility intentions are likely to shift to accommodate their own childless status (Quesnel-Valle & Morgan, 2003). As a result, relatives, friends, and coworkers could also develop a greater acceptance of childlessness. These attitudes would then gradually alter social norms and influence the opinions and preferences of younger cohorts regarding fertility and childlessness (Goldstein et al., 2003; Koropeckyj-Cox & Pendell, 2007). However, it is currently unclear whether this change is occurring. While the rates of both voluntary and involuntary childlessness seem to have increased (Virtala et al., 2011; Daniluk et al., 2012; Rijken & Merz, 2014), this change does not necessarily mean that these individuals are universally viewed more positively (Abma & Martinez, 2006; Australian Bureau of Statistics, 2007; Biddlecom & Martin, 2006; Bushnick et al., 2012; Dye, 2008; Merz & Liefbroer, 2012; Petraglia, Serour, & Chapron, 2013). Because countries like Canada still largely define women based on their motherhood role (Krull & Trovato, 2003; McInturff & MacDonald, 2015), women who opt out of the motherhood role may still be considered deviant and guilty of violating social norms.

Social norms are the rules and standards which are understood by members of a group and that guide and/or constrain social behaviour without the force of laws (Cialdini & Trost, 1998, p. 152). They have also been defined as statements about whether behaviours are necessary (prescription), allowed (permission), or not allowed (proscription) (Liefbroer & Billari, 2009). Social norms do not necessarily have to be shared by an entire population or society, but instead can be simply shared by a so-called reference group (Micheli, 2004). Social norms can regulate behaviour in several ways: by modeling prevailing attitudes; relaying expectations regarding behaviour; and by condoning social punishments against those who violate the norms (Lawson & Pierson, 2007). Generally, individuals who adhere to social norms, like having biological children, are expected to be rewarded by society (e.g., with acceptance, praise, inclusion, access to financial resources, and the means to meet basic physical and emotional needs) (Lawson & Pierson, 2007; Liefbroer & Merz, 2009). In contrast, those who violate social norms, such as those who are childless or childfree, can potentially be punished for

their behaviour (e.g., with disapproval, expulsion, and limited access to social resources) (Lawson & Pierson, 2007).

While the experiences of involuntarily childless individuals have been well documented, and reports of perceived stigma are numerous (e.g., van Balen & Inhorn, 2002; Hollos, 2003; Araoye, 2003; Greil et al., 2010; Eftekhar-Ardabili et al., 2011; Rich et al., 2011; Doyle, Pooley, & Breen, 2013; Turnbull, Graham, & Taket, 2016), it is less well understood in the literature how this corresponds with enacted stigma by the people and groups in their lives. Do significant others and members of social networks stigmatize people who do not have biological children? Overall, how does the public view involuntarily childless individuals? What stereotypes do they associate with this group? Between the 1970s and early 2000s a variety of studies were published in the psychological and sociological literature which examined attitudes toward childless individuals. Ganong, Coleman, & Mapes (1990) concluded with their meta-analysis on studies conducted from 1978 to 1985 that there was no difference in comparing participants' views of parents to adults who do not have children, but did find that voluntarily childless adults *specifically* were viewed less positively compared to parents. In contrast, after reviewing articles from 1960 to 2007 on research participants' views of childless/childfree groups, Basten (2009) concluded that acceptance of childlessness by society has "changed markedly over the past forty years" (p. 2) and that negative stereotyping of childfree groups, in particular, seem to have disappeared. More recently though in her review of studies from 1978 to 2010, McCutcheon (2018) echoed others (e.g., Rowlands & Lee, 2006) by stating that "consistently women without children, and particularly the voluntarily childfree, are perceived less favourable as compared to mothers" (p. 19).

However, the shortcomings of research on perceptions of childless as well as childfree groups are numerous, including lack of theory adoption and testing (McCutcheon, 2018) as well as reliance on vignette and survey designs using student participants (e.g., Calhoun & Selby, 1980; Lampman & Dowling-Guyer, 1995; LeMastro, 2001; Rowlands & Lee, 2006) with only a handful of studies recruiting community-based samples (Polit, 1978; Peterson, 1983; Callan, 1985). In general, the use of student samples can decrease external validity and our ability to generalize and make statements about overall attitudes towards individuals who are involuntarily childless. However, the use of student samples may be problematic for this area of research because university students tend to hold more liberal attitudes on issues such as reproductive

rights and sexual orientation (Lottes & Kuriloff, 1994; Dey, 1996; Lambert, Ventura, Hall, & Cluse-Tolar, 2006), are more likely to identify as feminist (Aronson, 2003; McCabe, 2005), and are more likely to remain childfree (Biddlecom & Martin, 2006; Kneale & Joshi, 2008).

Therefore, the views of university students are not necessarily representative of the dominant societal view of childlessness. More recent studies have also used vignette and survey methods with student samples (e.g., Copur & Koropecj-Cox, 2010; Koropecj-Cox et al., 2018), which potentially further validates concerns that our understanding of the issue of childlessness stigma overall may be limited (McCutcheon, 2018). An investigation of student compared to general public sample responses on views of childlessness may mitigate these concerns, which was a specific objective of this dissertation research.

Perhaps even more problematic, though, is that this body of literature is saturated with inconsistencies in definitions of childlessness and focuses on biological childlessness. For example, involuntary childlessness and infertility are often conflated (e.g., Lampman & Dowling-Guyer, 1995) as well as voluntary and involuntary childlessness (e.g., Etaugh & Kasley, 1981; LaMastro, 2001). Further, few studies have considered the transient nature of childlessness or examined views about people who are temporarily versus permanently childless (e.g., Peterson, 1983; Koropecj-Cox, Romano, & Moras, 2007). There are also inconsistencies with respect to the comparison groups used among the studies which have examined views on childlessness. While some studies have compared both biologically voluntarily and involuntarily childless individuals to biological parents (e.g., Lampman & Dowling-Guyer, 1995; Mueller & Yodder, 1999), others have compared biologically childless/childfree individuals to one another (e.g., involuntarily versus voluntarily childless) (e.g., Peterson, 1983; Koropecj-Cox et al., 2007). Overall, these inconsistencies make it challenging to definitively conclude the degree to which these different groups are stigmatized by the public. In addition, much of this literature is more than 10 years old, making it difficult to situate the research findings in the present time. With respect to social norms regarding reproductive status, we cannot assume that the findings from 10 years ago or more will hold up today. Thus, part of the goal of the present study was to examine if there has been a change in the social norms around childlessness.

With these shortcomings in mind, a summary of research findings regarding the perspectives of childless individuals is warranted. Voluntarily childless individuals (i.e., being childfree) have tended to evoke negative reactions among research participants (Lampman &

Dowling-Guyer, 1995; Mueller & Yodder, 1997; Kopper & Smith, 2001; LaMastro, 2001; Rowlands & Lee, 2006; Vinson, Mollen, & Smith, 2010; Copur & Koropecj-Cox, 2010; Koropecj-Cox et al., 2015; Koropecj-Cox et al., 2018). For example, voluntarily childless couples have been viewed as unhappily married, psychologically maladjusted, emotionally immature, materialistic, career driven, selfish, lonely, unhappy, less loving, less devoted, and misguided in their choice to remain childless (Peterson, 1983; Callan, 1985; Copur & Koropecj-Cox, 2010; Koropecj-Cox et al., 2015). While reflecting personal accounts and not public perceptions, some researchers state that voluntarily childless women have been portrayed as “free riders” who contribute less to society than child bearers (Scheiwe, 2003) and as less altruistic and humanitarian (Rich et al., 2011). A participant in Peterson and colleague’s research (2015) reported reading in a blog that “someone was upset and angry with voluntarily childless people because they suck out the juicy part of what society has to offer without contributing anything themselves”. Other participants from Maher and Saugeres’ (2007) study indicated that they “were perceived as selfish, immature, and abnormal for not wanting children”, “a bit of a freak because I don’t have that motherly instinct”, and “experienced pressure from friends, relatives, and work colleagues to have children”.

Perhaps reflecting the motherhood mandate, childfree women have been viewed as less caring, less emotionally healthy, and lower in warmth than women with children (Lampman & Dowling-Guyer, 1995; Mueller & Yoder, 1997; LeMastro, 2001; Copur & Koropecj-Cox, 2010; Koropecj-Cox et al., 2015; Koropecj-Cox et al., 2018); as sick, abnormal, incomplete, or lacking (Calhoun & Selby, 1980); and, materialistic and non-conforming (Callan, 1983). Many voluntarily childless women have also been viewed as child-haters, unwomanly, immoral, incomplete, unloving, irresponsible, selfish, too career-oriented, abnormal, immature, and bitter (LeMastro, 2001). Voluntarily childless women also tend to be judged more harshly than voluntarily childless men (Koropecj-Cox et al., 2007). Some research has suggested, though, that stereotypes about people who are voluntarily childless are not always negative, particularly among samples of college students (Koropecj-Cox et al., 2007; Basten, 2009).

Compared to the voluntarily childless, involuntarily childless individuals have not received the same degree of negative judgement in past studies (Calhoun & Selby, 1980; Ganong, Coleman, & Mapes, 1990; Peterson, 1983). However, this is not to say that they have not received negative judgements. In general, involuntarily childless individuals have been

perceived less positively when compared to parents. Involuntarily childless women have been described as less emotionally healthy, more anxious, and more stressed (Lampman & Dowling-Guyer, 1995; Koropecykj-Cox et al., 2015). They have also been viewed as unhappy, dissatisfied, selfish (Koropecykj-Cox, Romano, & Moras, 2007), and less likable, caring, warm, kind, nurturing, traditional, and feminine compared to mothers (Koropecykj-Cox et al., 2015). As previously noted, the issue of disclosure may contribute to involuntarily childless individuals being subjected to the same negative views imparted on the voluntarily childless; individuals who do not disclose their involuntarily childless status to others may be misconstrued as being childless by choice (Lampman & Dowling-Guyer, 1995). However, some researchers have found that involuntary childlessness is not as uniformly stigmatizing as voluntary childlessness and has even elicited some positive attributions (Lampman & Dowling-Guyer, 1995; Kopper & Smith, 2001). In some cases, involuntarily childless couples have been described as having more positive and stronger relationships (Lampman & Dowling-Guyer, 1995; Koropecykj-Cox, Romano, & Moras 2007). Involuntarily childless individuals have also been perceived and treated sympathetically by student samples when they are perceived as being less in control and less responsible for their situation (Kopper & Smith, 2001). In addition, couples have been rated more positively when they were perceived as temporarily rather than permanently childless (Koropecykj-Cox et al., 2007).

Overall, the empirical literature on perceptions towards childless individuals described above provide important insight regarding the stigma enacted specifically toward involuntarily childless individuals, but many of them date back close to 10 years or more and do not include Canadian samples. As a result, their findings may not reflect current beliefs and perceptions among Canadians. Further, many of them fail to incorporate a theoretical framework to account for stigma enacted towards people experiencing involuntary childlessness. Theories allow us to understand an issue and provide models which researchers can use to develop better research and intervention strategies (Deacon, 2006). Descriptive research, on the other hand, simply provides a snapshot in time and describes an issue or state (Kothari & Gaurav, 2014). The SCM above is a prime theoretical model for exploring the perceptions and stereotypes associated with involuntarily childless individuals and has not yet been used to examine childless groups. There is also some evidence of the utility of this theory for examining social censure and sanctioning (e.g., Cuddy, Fiske, & Glick, 2007). However, there is another social psychological theory which

has been developed by Weiner (1980) to examine social censure and sanctioning and has also been used to examine perceptions about childless groups. As such, these two theoretical models have been incorporated into my dissertation research.

1.6 Attributions and Weiner's Attribution-Affect-Action Model of Helping Behaviour

When we do not possess context-specific information or when information-processing demands are high, stereotypes can operate as judgemental heuristics (Macrae, Milne, & Bodenhausen, 1994; Peterson, Slothuus, Stubager, & Togeby, 2010). As such, stereotyping can be a useful function because it simplifies complex information (Taylor, Fiske, Etcoff, & Ruderman, 1978; Tajfel, 1981) even though the stereotype may not be accurate or appropriate (Ragusa, 2015). A proposed mechanism by which stereotyping occurs in low-information/high-processing contexts is attribution theory (Tan, Fukioka, & Tan, 2000; Reyna, Henry, Korfmacher, & Tucker, 2006; Johnson, Olivo, Gibson, Reed, & Ashburn-Nardo, 2009). Attribution theory is concerned with how and why people explain events and the behaviour of others. The term attribution has two primary meanings derived from social psychology. The first relates to explanations of behaviour (i.e., answers to why questions related to behaviour); the second relates to inferences or ascriptions (i.e., inferring traits from behaviour, ascribing blame to a person) (Malle, 2011). These meanings are similar in that they both refer to the process of assigning: in referring to attribution as an explanation, behaviour is assigned to its cause; in referring to attribution as an inference, a quality or attribute is assigned to the agent on the basis of an observed behaviour (Malle, 2011). The central assumption of attribution theory is that humans are continually searching for the causes of internal or environmental events and understanding these causes will allow a person to function more adaptively (Heider, 1958; Kelley, 1967; Weiner, 1985).

Fritz Heider (1958) was the first to propose a psychological theory of attribution. In his book *The Psychology of Interpersonal Relations*, he described processes by which an individual (or social actor) makes attributions about his or her world – attributions of causes, dispositions, and inherent properties. According to Heider (1958), the result of an action is dependent on factors within individuals and factors within the environment. Individuals (whether they are social actors or observers) are then tasked with determining whether the cause of an outcome is located within a person/themselves or within the environment. Like Heider (1958), Kelley (1967) believed that causality was assigned to either the person or the environment, but he believed the

basic question was how the perceiver assigns causality to one entity or the other. He proposed that there are three factors which can influence the attribution process: distinctiveness, consensus, and consistency. Following is a relationship example to illustrate how these three factors work together. Rachel perceives that Leah is an unreliable friend. If Rachel always perceives Leah as unreliable, distinctiveness is low, but if Rachel rarely perceives Leah as unreliable, distinctiveness is high. If other friends perceive Leah as unreliable, then consensus is high, whereas if no other friends perceive Leah as unreliable then consensus is low. Finally, if Rachel has perceived Leah unreliable before, consistency is high, but if this is the first time that she has perceived her as unreliable, consistency is low. Overall, if a behaviour has low distinctiveness, high consensus, and high consistency, there is a good chance that the cause of the outcome will be assigned to the individual. For this example, one would probably conclude that Leah is an unreliable friend. Alternatively, if the behaviour has low consistency, high distinctiveness, and low consensus, the cause will likely be assigned to a specific context or the external environment. As such, one would then conclude that the perception is unique to Rachel and there is no reason to think that Leah is unreliable.

Following Heider (1958) and Kelley (1967), Weiner (1980) first developed his attribution theory with three underlying dimensions. The first dimension is locus, referring to whether a cause is internal or external to an individual. Ability and effort would be associated with having an internal locus, while luck would be associated with an external locus. The second dimension, stability, concerns the changeability of the cause, specifically whether it is stable or variable across time and situations. For example, a person's behaviour could be attributed to either a personal trait (enduring) or a situation (transient). The third dimension of Weiner's model is control, which refers to whether the cause of an outcome is within an individual's control or outside of the individual's control. This is directly related to personal responsibility. Controllable causes are thought to trigger anger and uncontrollable causes are thought to trigger sympathy in social observers when reacting to undesirable situations or negative outcomes.

According to Weiner's revised theory, the attribution-affect-action (AAA) model (Schmidt & Weiner, 1988; Weiner, 1980), all causes share these three dimensions – locus, stability, and control. When a social observer encounters or observes someone in a negative state or situation where assistance might be needed, the observer then engages in the attribution process and makes judgments along these three dimensions. The resulting judgements will

determine the emotional/affective response the observer has towards the person in need. Subsequently, the affective response will determine the behavioural response of the observer toward the individual. Weiner posited that when a negative or an adverse state is viewed as uncontrollable (attribution), feelings of sympathy (affect) will arise which evokes a prosocial/helping response (action). In contrast, attributing a situation to factors under the individual's control will arouse negative emotions (e.g., irritation and anger) which are likely to evoke a punishing or discriminatory response (Schmidt & Weiner, 1988; Weiner, 1980a, 1980b, 1995; Weiner, Perry, & Magnussen, 1988). Numerous examinations of attributions for outcomes have concluded that social observers hold individuals more to blame for a 'socially undesirable' condition when it is perceived as being under their control (Weiner, 1980a, 1980b, 1995; Weiner, Perry, & Magnussen, 1988; Schmidt & Weiner, 1988; Turnquist, Harvey, & Anderson, 1988). Attitudes toward such individuals are more likely to be negative (Richardson, 1993), and these individuals are less likely to receive support, positive judgements, and social rewards from others (Ickes & Kidd, 1976; Weiner, 1979; Lawson, 2003).

Weiner's model has been applied to and supported for a variety of psychosocial issues such as prenatal testing (Lawson, 2003), medical staff's perceptions of deliberate self-harm (Jones & Hastings, 2003; Mackay & Barrowclough, 2005), services for people with intellectual disabilities (Wanless & Jahoda, 2002; Dagnan & Cairns, 2005; Rose & Rose, 2005; Willner & Smith, 2008), poverty (Hine & Montiel, 1999; Weiner, Osborne, & Rudolph, 2011), mental health stigma (Corrigan, 2000; Corrigan & Kleinlein, 2005), and victimization (Mulder, Pouwelse, Lodewijkx, & Bolman, 2013; Sperry & Siegel, 2013).

1.6.1 Weiner's AAA model applied to the issue of childlessness. Following the logic of the AAA model, attributing a woman's childlessness to internal, controllable factors (i.e., the woman chose not to have children, or delayed having children until it was "too late") should be associated with higher stigma, more negative emotional responses, harsher judgements, and greater social censure directed toward the woman than would ascribing it to factors outside of the woman's control. To date, there is only one study which has examined attitudes towards childlessness using Weiner's AAA model of helping behaviour. Using vignettes, Kopper and Smith (2001) assessed the knowledge and attitudes of 661 college students toward infertility and reactions to couples with varied fertility statuses. As expected, based on the AAA model, the voluntarily (childfree, childless by choice) couples were attributed the greatest degree of control

and responsibility for their situation and received the most negative affect of all the groups. Further, couples whose childless status was unexplained were also attributed a high degree of control and responsibility. However, contrary to expectations based on the AAA model, these couples received the most positive affective reactions. With respect to infertile couples facing female-factor infertility in which the female partner is described as having obtained an advanced degree within her field, it was expected that this group would be perceived as having greater responsibility and control for the situation and receive the most negative affective reactions. Contrary to expectations, this group was not perceived as responsible or in control, and they also received more sympathy. This finding could potentially be explained using the SCM; participants may have viewed the infertile/involuntarily childless groups as part of the “in-group”. In sum, Weiner’s model was supported in that groups who were deemed responsible for their situation elicited more negative emotions and the groups who were not considered responsible elicited feelings of sympathy.

The main shortcoming with respect to Kopper and Smith’s study is that the “action” or “social sanctioning” component of Weiner’s model was not examined. As such, the goal of the current line of research was to test each component of the model in the case of involuntary childlessness. The form of social sanctioning that was examined in the current study was support for access to assisted reproductive technology (ART). It was anticipated that as more women delay the age at which they have their first and even subsequent children, there will be even greater demand for access to ART from this group (Johnson & Tough, 2012). If more women continue to delay childbearing in Canada and many other Westernized countries may see an increase in demand for access to ART. While not all involuntarily childless individuals choose to pursue this technology to aid in conception (Boivin et al., 2007), there are many individuals who possess both a strong desire to conceive a biological child and the social and material resources to achieve this goal (Greil & McQuillan, 2010). However, there are many individuals who cannot afford the high financial cost associated with most modes of fertility treatment (Kissil & Davey, 2012). As the rates of involuntary childlessness increase, it is likely that more people will seek access to ART, and there will very likely be an increase in demands for ART to be encompassed within the universal healthcare net. As many argue that our healthcare system is already under-resourced and over-extended (Clarke, 2016; Valle, 2016), it is necessary to have a clear understanding of how the general population in Canada perceives these issues. Based on

Weiner's model, support for ART coverage may vary based on attributions for childlessness, whereby those considered responsible for their childless state are likely to elicit more negative affect and thus less support for access to ART.

1.7 An Overview of Assisted Reproductive Technology (ART)

The use of ART to aid conception is on the rise in many parts of the world. ART refers to a variety of methods used to achieve pregnancy by non-coital, artificial or partially artificial means (Wright, 2011; Johnson & Tough, 2012; Wyndham, Figueira, & Patrizio, 2012). These methods allow scientists to manipulate the fertilization process to bypass pathological obstacles, such as blocked fallopian tubes and non-functioning ovaries in women, and blocked vas deferens and low sperm count in men (Kamel, 2013). This technology also allows people to overcome social circumstances which limit their ability to have a biological child, including members of the LGBTQ community and single women (ASRM, 2013a). The world's first baby created with the assistance of artificial insemination, Louise Brown, was born in 1978 (Kamel, 2013). Since then, an estimated 4.7 million children have been born worldwide to parents who are treated with various forms of ART (Chambers et al., 2012). In most countries, the use of ART is increasing by 5-10% per annum (Kupka et al., 2014). In Canada, the number of ART cycles [i.e., IVF, intrauterine insemination (IUI), intracytoplasmic sperm injection (ICSI)] performed continuously increased between 2008 and 2011. Between 2010 and 2011, for example, the number of cycles performed increased by 30% (Gunby, 2014). In 2011, a total of 23,997 ART cycles were reported to the Canadian Assisted Reproductive Technologies Register (CARTR), resulting in 7030 clinical pregnancies and at least 5329 deliveries and 5276 live births (Gunby, 2014).

1.7.1 Reasons individuals use ART. There are several reasons why individuals might utilize ART to aid in conception. An increasing number of individuals in the LGBTQ community are turning to ART to overcome some of the logistics of reproduction (i.e., the need for both male and female gametes; ASRM, 2013b; Corbett, Frecker, Shapiro, & Yudin, 2013). For single women or lesbians, it offers a chance to become a mother without necessarily needing a male partner to do so (Beckman & Harvey, 2005). In some cases, ART can provide a means of control over reproductive health by allowing individuals (in conjunction with effective contraception) to choose when to have children (Beckman & Harvey, 2005). While there is no clear causal link, the ability to control their reproductive futures allows many women in countries like Canada to delay childbearing (Balasch & Gratacos, 2012; Daniluk, Koert, & Cheung, 2012; Johnson &

Tough, 2012; Mortensen, Hegaard, Andersen, & Bentzen, 2012). This presents a problem though because female age is considered the most important determining factor of fertility as it is associated with decreased quality and quantity of oocytes (Balasch & Gratacos, 2010; Johnson & Tough, 2012).

It appears that some women are delaying childbearing partly due to false beliefs that ART can overcome any fertility issues they may experience in the future (Jensen & Bute, 2010; Liu & Case, 2011; Johnson & Tough, 2012; Fulford, Bunting, Tsibulsky, & Boivin, 2013; Jensen, Martins, & Parks, 2018). These beliefs seem to stem from a lack of education on basic reproduction and fertility (Williamson, Lawson, Downe, & Pierson, 2014), misleading media reports of pregnancies in older celebrity women (MacDougall, Beyene, & Nachtigall, 2012), and/or ART clinics failing to accurately report success and failure rates (Hawkins, 2012). However, most of the available technology is unable to fully compensate for the age-related decline in female fertility (Balasch & Gratacos, 2010; Virtala et al., 2011). Specifically, the effectiveness of ART tends to decrease after the age of 35 for most women (Maheshwari et al., 2008; Wright, 2011; Johnson & Tough, 2012). Only about half of the age-related declines in female fertility that occurs between 30 and 35 years and a third that occurs between 35 and 40 years can be overcome with technology like IVF (Maheshwari et al., 2008; Balasch & Gratacos, 2010). As such, women are advised to begin using ART before the age of 35 years to maximize their chance of pregnancy (Herbert, Lucke, & Dobson, 2012). Women aged 42 years plus who undergo ART generally have only a 4.2% chance of giving birth to a child compared with 41.4% of women less than 35 years of age (Wyndham et al., 2012). Among Canadian women younger than 35 years, 38 out of 100 gave birth per ART cycle compared to 28 out of 100 for women age 35 to 39, and 11 out of 100 for women 40 years and older (Gunby2010). These high failure rates are largely attributed to the decrease in quantity and quality of oocytes (Balasch & Gratacos, 2010; Bretherick et al., 2010). Women over the age of 40 have an improved chance of giving birth to a healthy child when they use donor eggs compared with women who are below age 40 (Gunby, 2010). Data suggests that one of the main reasons individuals are turning to ART in Canada is to overcome issues with female age-related declines in fertility (Johnson & Tough, 2012).

1.7.2 Financial cost of ART. The majority of fertility treatments are incredibly expensive and inaccessible to many people. The high cost of treatment is largely driven by the

rising use of ART; as the demand for ART increases so does the price (Stephen & Chandra, 2006; Oakley, Doyle, & Maconochie, 2008). In cases where individuals are faced with biological infertility issues, initial tests designed to locate the source of difficulty in conceiving costs several hundred dollars (Shanley & Asch, 2009). The average cost of the most recognized and widely used form of ART, IVF, is about \$10,000 CDN (Chambers et al., 2009; Smith et al., 2011; Teoh & Maheshari, 2014), but can increase to \$20,000 CDN for women who require higher doses of medication (Bouzayen & Eggertson, 2010). The use of donor eggs or donor sperm can further increase the overall cost of treatment compared to when people are able to use their own gametes (Shanley & Asch, 2009).

In most cases, multiple rounds of treatment are required (Ly, Aziz, Safi, & Agarwal, 2010). The financial burden placed on patients who can only afford one or two IVF treatment cycles, for example, can lead to the transfer of more embryos (and subsequently multiple births) in order to increase the chances of success in just one cycle (ASRM, 2013b). For individuals who cannot afford IVF and choose less expensive means of treatment such as superovulation with intrauterine insemination, the risk of multiple pregnancies is also high (1 in 4) (Leader, 2013). The expense of obstetric care is 2.5 times higher for multiple pregnancies than for singletons (i.e., one embryo and subsequent child) because of the higher risk, additional visits, antenatal admissions, and mode of delivery (Leader, 2013). As well, the cost of neonatal and post-neonatal hospital care is significantly higher for multiples compared to singletons (Leader, 2013). Further, the impact that multiple births can have on families in terms of daily living expenses are generally higher than parents with one newborn (Leader, 2013). By requiring single embryo transfer (which is possible with more sophisticated technologies) and funding treatment, the risk and subsequent costs of multiple births can be reduced (Bissonnette et al., 2007). Funding IVF may also lead some women to seek treatment sooner when their chances of conception are better. As women age (i.e., enter their late thirties), the effectiveness of treatment decreases while the expenses become significant (Leader, 2013). Earlier treatment could help minimize the cost per live birth.

1.7.3 Disparities in access to ART. With a median Canadian family income of \$70,336 (Statistics Canada, 2016), ART appears to be out of reach for many individuals who cannot afford the high price tag. As a result, only the most affluent individuals can easily access ART to ameliorate their conception issues (e.g., decreased fertility, lack of necessary partner, etc.).

Fertility treatments tend to be used primarily by white women and heterosexual couples who are college-educated, able-bodied, financially well-off (Peterson, 2005; Bitler & Schmidt, 2006) and with some form of biological inability to reproduce (Shanley & Asch, 2009). Many of these individuals choose to delay childbearing to pursue post-secondary education or establish careers, and as a result are likely to require access to technology to overcome fertility issues associated with advanced maternal age (Johnson & Tough, 2012; Dougall et al., 2012). This does not mean that other Canadians do not require or cannot turn to various forms of ART, but to do so many must go into financial debt (i.e., take out loans), turn to family and friends for loans, or raise money through online crowdfunding sources (e.g., Indiegogo, GoFundMe). Marginalized groups (e.g., individuals with low socioeconomic status) face significant barriers preventing them from accessing ART, with socioeconomic status being the primary barrier (Kissil & Davey, 2012; Kazyak et al., 2016). There is also a rural/urban divide in terms of access to treatments since most (if not all) fertility specialists and clinics are situated in major cities (www.fertilityclinics.ca). As a result, individuals in rural and remote regions of Canada are less likely to seek treatment and tend to wait significantly longer before initiating assessment and treatment compared to more privileged, urban-located groups (Inhorn & Fakih, 2006; Jain, 2006). Some studies have suggested that women with lower socioeconomic status tend to have higher infertility rates, largely because of environmental and lifestyle factors such as high exposure to toxins (e.g., lead), poverty, poor nutrition, heavy smoking, and increased rates of infectious diseases (Inhorn & Fakih, 2006). Despite being arguably more “in need” of reproductive technologies due to higher rates of infertility, people from low socioeconomic groups are most often unable to easily access treatments which may allow them to fulfill their childbearing intentions.

1.7.4 Financial assistance for ART. Many people have become concerned with the high cost of fertility treatments and the implications that differential access to treatment along economic lines has for people’s ability to complete their families (Shanley & Asch, 2009). This has led to increased lobbying of state legislatures to require insurance coverage (e.g., in the U.S.) for some forms of treatment (i.e., IVF; Shanley & Asch, 2009). Public funding or health insurance coverage of ART varies worldwide. The European Society of Human Reproduction and Embryology (ESHRE) recommend partial reimbursement in European nations (Pennings et al., 2008). In Germany, co-payment of 50% for three ART cycles is offered to couples, with

limits on age (Griesinger, Diedrich, & Altgassen, 2007). In the U.K. the National Institute for Health and Clinical Excellence (NICE) guidelines suggest up to three cycles of treatment be funded by the National Health Service (NHS), but this has not yet been implemented (Aleyamma et al., 2011). The Belgian government reimburses the laboratory expenses for up to six IVF cycles until a woman is 42 years old (Gordts et al., 2005; Ombelet et al., 2005). In Australia, there are no limitations and treatments are publicly funded (Chambers et al., 2009). Like all medical procedures, ART in the U.S. is self-financed (Aleyamma et al., 2011).

With respect to Canada, The Canadian Fertility and Andrology Society (CFAS) has defined infertility as a disease and has deemed its associated diagnostic and surgical management as medically necessary (CFAS, 2010). Accordingly, they assert that publicly funded IVF and ICSI should be provided for all citizens across Canada by provincial medical insurance plans (CFAS, 2010). A similar statement was put out by the Royal Commission on New Reproductive and Genetic Technologies which stated that full public funding should be provided for fertility treatments with proven benefit (Royal Commission on New Reproductive Technologies, 1993). The CFAS has also stated that fully-funded fertility treatment should be provided to all insured persons as defined by the Canada Health Act (Section 9 – Comprehensiveness; CFAS, 2010). However, the Canadian government has failed to satisfy the Canada Health Act requirement of distributive justice with respect to access to clinically effective fertility treatments (Nisker, 2008). Despite offering universal healthcare coverage, financial support for ART within the Canadian healthcare system varies across provinces and is limited overall. The Supreme Court of Canada ruled in 2010 that each province be responsible for its own clinical activities relating to assisted reproduction, which means that financial coverage for treatments is inconsistent across the country (Quebec Health and Welfare Commissioner, 2014). In most cases, individuals are responsible for most or all the costs of fertility treatment. While coverage for fertility treatments is available within many private insurance plans, there are also inconsistencies between the provinces (EMD Serono, 2011). Table 1.1 outlines the most recent summary of public health coverage for fertility treatments available in each province (developed by Leslie Young and featured in the November 15, 2016 Globe and Mail report by Monique Scotti):

Table 1.1 Public coverage of fertility treatments across Canada (Young, 2016)

Province	ART Coverage Details
Alberta	<p>What's covered: Infertility testing (sperm count, ultrasound, etc.) and surgeries to correct problems like blocked fallopian tubes.</p> <p>What's not: IVF or similar treatments, but Premier Notley recently indicated that her government was considering such a program.</p> <p>Tax breaks or one-time credits? No</p>
British Columbia	<p>What's covered: Infertility-related surgeries to correct problems like blocked fallopian tubes, tests to find cause of infertility.</p> <p>What's not: In-vitro fertilization (IVF) or intrauterine insemination (IUI).</p> <p>Tax breaks or one-time credits? No</p>
Manitoba	<p>What's covered: Infertility testing (sperm count, ultrasound, etc.) and surgeries to correct problems like blocked fallopian tubes.</p> <p>What's not: IVF or similar fertility treatments are not fully covered.</p> <p>Tax breaks or other one-time credits? Yes. A fertility treatment tax credit covers 40% of treatment costs related to infertility, including IVF, to a maximum of \$8,000 a year. When combined with existing provincial/federal medical expenses tax credits, up to 66% of expenses could be reimbursed.</p>
New Brunswick	<p>What's covered: Infertility testing (sperm count, ultrasound, etc.) and surgeries to correct problems like blocked fallopian tubes</p> <p>What's not: IVF treatment is not fully covered.</p> <p>Tax credits or other one-time credits? Yes. A Special Assistance Fund for infertility treatment provides a one-time grant. People can claim 50 per cent of eligible incurred costs of IVF or IUI procedures and related drugs, up to a maximum of \$5,000.</p>
Newfoundland and Labrador	<p>What's covered: Infertility testing (sperm count, ultrasound, etc.) and surgeries to correct problems like blocked fallopian tubes.</p> <p>What's not: IVF or costs associated with IVF treatments.</p> <p>Tax credits or other one-time credits? No.</p>

North West Territories	<p>What's covered: Infertility testing. If a diagnostic service is not available in the NWT, the referring health provider can seek prior approval in order for the test to be conducted elsewhere and then covered by the NWT Health Care Plan. Surgical procedures to treat infertility are also covered, and can be performed in Yellowknife.</p> <p>What's not: IVF or costs associated with IVF treatments.</p> <p>Tax credits or other one-time credits? No.</p>
Nova Scotia	<p>What's covered: Infertility testing (sperm count, ultrasound, etc.) and surgeries to correct problems like blocked fallopian tubes.</p> <p>What's not: IVF treatments.</p> <p>Tax credits or other one-time credits? No.</p>
Nunavut	<p>What's covered: Infertility testing (sperm count, ultrasound, etc.) and surgeries to correct problems like blocked fallopian tubes.</p> <p>What's not: IVF or similar fertility treatments are not fully covered.</p> <p>Tax breaks or other one-time credits? Yes. A fertility treatment tax credit covers 40% of treatment costs related to infertility, including IVF, to a maximum of \$8,000 a year. When combined with existing provincial/federal medical expenses tax credits, up to 66% of expenses could be reimbursed.</p>
Ontario	<p>What's covered: Infertility testing, minor surgeries, artificial insemination and one IVF cycle per eligible patient, per lifetime. One additional IVF cycle if the woman is acting as a surrogate. Basic infertility testing and surgeries, plus one fertility preservation cycle, (sperm and egg freezing) for medical reasons, per patient per lifetime.</p> <p>What's not: Repeated IVF treatments, fertility drugs.</p> <p>Tax breaks or other one-time credits? No</p>
Prince Edward Island	<p>What's covered: PEI did not reply to requests for clarification on its coverage plan or access to treatment on the island. Like other provinces, the government will cover consultations or fertility testing. Coverage/availability of fertility surgeries is unclear.</p> <p>What's not: IVF or similar infertility treatments.</p> <p>Tax credits or other one-time credits? No.</p>

Quebec	<p>What's covered: Consultations, testing and infertility surgeries. Provincial IVF coverage is capped at age 42, and couples who want to access IVF pay for the procedure up front. They get money back based on a sliding scale of tax credits. Drugs are partly covered.</p> <p>What's not: Repeated IVF cycles.</p> <p>Tax breaks or other one-time credits? Yes. The scale ranges from 80 per cent of costs reimbursed for couples with a family income of less than \$50,000 to 20 per cent of costs for families who earn more than \$120,000 a year. Only childless couples can access the credits.</p>
Saskatchewan	<p>What's covered: Infertility testing (sperm count, ultrasound, etc.) and surgeries to correct problems like blocked fallopian tubes.</p> <p>What's not: IVF treatments or any costs associated with those treatments.</p> <p>Tax breaks or other one-time credits? No</p>
Yukon	<p>What's covered: Infertility testing. Laboratory examination for presence or absence of sperm is available locally, but sperm counts are not. If this test is available in Canada at a lab that can bill Yukon, it is an insured service and medical travel would be covered. Ultrasounds are available locally and are insured, as are surgical procedures.</p> <p>What's not: IVF or any treatment associated with IVF.</p> <p>Tax breaks or other one-time credits? No.</p>

While some Canadian fertility clinics and health care professionals believe that funding ART at the provincial and federal levels is an ethical and economical imperative (Leader, 2013), some commentators have asserted that fertility treatment is not considered to be medically necessary. Some have argued that many Canadians view ART as medically unnecessary because, unlike most developed countries, Canada does not acknowledge the value of supporting individuals in accessing fertility treatment (Hughes, 2008). On the other hand, there are groups who oppose financial coverage of ART on the grounds that support for ART reflects a societal approach that favours technology over other ways of supporting families, including adoption and infertility prevention (Quebec Health and Welfare Commissioner, 2014). The argument has also been made that infertility deserves the same recognition and support from public and private sectors as is given to heart disease, diabetes, and arthritis (EMD Serono, 2011). Feminist opinions of this issue also vary, with some viewing ART as a way of promoting reproductive

autonomy for women, while others view it as a potential means of subservience to men or society (Quebec Health and Welfare Commissioner, 2014). Overall, the general public's views of this issue are unclear at this time. Specifically, it is unclear whether the dominant societal view is supportive of encompassing ART within the universal healthcare net.

1.8. The Current Project: Overall Purpose, Research Questions, and Summary of Studies

The overall purpose of the current line of research was to examine how involuntarily childless women are perceived by the Canadian general public by exploring the stigmatization and stereotyping surrounding these individuals as well as the subsequent social censure and sanctioning projected on them. The specific overarching research questions for the current project included: What are the dominant societal perceptions of different categories of involuntarily childless women? What are the affective reactions elicited by each category? What are the potential social sanctions placed on each category? To answer these questions, I examined the attributions associated with various groups of involuntarily childless women as well as the affective reactions elicited by them. Further, I queried whether people would offer different modes of support to aid involuntarily childless groups in accessing assisted reproductive technology (ART) to overcome fertility issues. The Stereotype Content Model (SCM; Fiske, Cuddy, Glick, & Xu, 2002) and Weiner's AAA model of helping behaviour (Schmidt & Weiner, 1988; Weiner, 1980) were adopted as theoretical frameworks to both guide this project and address the dearth of atheoretical research on this topic. For the current project, involuntarily childless women were the focus because childlessness is largely viewed as a "woman's problem" (Behboodi-Moghadam et al., 2013; Inhorn & Patrizio, 2015) and they are more likely to undergo ART procedures than men as the majority of the technology is designed to be used on the female reproductive system (Wang & Sauer, 2006). The terms women/woman will be used throughout rather than female(s) as this dissertation focuses on the social construction of a biological phenomenon (i.e., involuntary childlessness).

A brief summary of the methods undertaken in this dissertation is as follows. First, a preliminary investigation of the application of the SCM to the issue of involuntary childlessness was undertaken in Study 1 using an undergraduate student sample and online questionnaire which measured components of the theoretical model. In Study 2, the AAA model was tested in addition to the SCM using another undergraduate student sample and online questionnaire. To increase internal validity, a between groups design was employed in Study 3. Undergraduates

were randomly assigned one of four vignettes describing women who differed based on their involuntarily childless circumstance and then completed measures assessing the SCM and AAA variables. Finally, to increase external validity a stratified by province Canadian general population sample was recruited in Study 4, which employed the same methodology as Study 3.

CHAPTER 2. STUDY 1

2.1 Study 1 Purpose

The primary purpose of Study 1 was to determine whether the SCM is an appropriate model to examine differential stereotypes applied to involuntarily childless women. To examine the differential, dominant societal perceptions of varying categories of women (including some specific target groups – involuntarily childless women), a preliminary investigation testing the SCM measures was conducted. Specifically, participants rated different categories of women in terms of competence and warmth to determine which “stereotype” outlined in the SCM characterized each group (i.e., paternalistic, admiration, contemptuous, envious) and subsequently which affective reactions were elicited by the women (pity/sympathy, contempt, envy, and admiration).

Fiske and colleagues (1999; 2002; 2012), Eckes (2002), as well as Cuddy and colleagues (2004) have each established the quadrant membership within the SCM for several general categories of women. In particular, admired groups of women (high warmth, high competence, high status) have included the categories “society ladies” and “confident-types”; contemptuous/disdained types have included those described as “chicks”, “trendy”, “bourgeois”, and “naïve”; subtypes of women rated as incompetent but warm have included “housewives”, “secretaries”, and “wallflowers”; and, competent, but cold women have included those described as “feminists”, “career women”, “intellectuals”, “vamps”, “punks”, and “hippies”. Despite the previous application of the SCM to varying social groups of women this theory has not yet been applied to examine involuntarily childless women.

2.2 Study 1 Research Questions and Hypotheses

The specific study hypotheses and research questions will first be outlined:

Hypothesis 1 (H1): In verifying that the SCM is an appropriate model, it was expected that the SCM categories of specific groups found in past research (e.g., Fiske et al., 2002) will be replicated when modified to reflect women/mothers.

H1a: Religious women will be allocated to the “Admired Quadrant” (Quadrant 1).

H1b: Physically disabled women, elderly women, and homemakers will be allocated to the “Paternalistic Quadrant” (Quadrant 2).

H1c: Teen mothers, homeless women, and welfare-dependent women will be allocated to the “Contemptuous Quadrant” (Quadrant 3).

H1d: Rich/wealthy women and career mothers will be allocated to the “Envious Quadrant” (Quadrant 4).

Research question 1 (RQ1): As this was the first investigation of the SCM using involuntarily childless categories of women, no specific hypotheses could be posed. However, at a base level it was expected that the categories of women introduced for the present study will vary in terms of rated warmth and competence and thus will fall into differential SCM quadrants.

Hypothesis 2 (H2): As outlined by the SCM, the quadrants will be associated with differing levels of status and competition:

H2a: Quadrant 4 will elicit higher ratings of status and Quadrant 3 lower levels of status.

H2b: Quadrants 3 and 4 will elicit higher ratings of competition compared to Quadrants 1 and 2.

Hypothesis 3 (H3): As predicted by the SCM, each quadrant will elicit distinct affective reactions.

H3a: Quadrant 1 will elicit higher ratings of admiration compared to the other quadrants.

H3b: Quadrant 2 will elicit higher ratings of pity/sympathy compared to the other quadrants.

H3c: Quadrant 3 will elicit higher ratings of contempt compared to the other quadrants.

H3d: Quadrant 4 will elicit higher ratings of envy compared to the other quadrants.

2.3 Study 1 Participants and Procedure

The current study was approved by the University of Saskatchewan Behavioural Research Ethics Board (Beh #16-45). A sample of 204 individuals (38 males, 160 females) from the University of Saskatchewan with a mean age of 20.91 years ($SD = 3.92$; range = 18 to 46 years) took part in the current study. The majority of the sample was born in Canada (84.2%), identified as Canadian (93.1%), identified as white or Euro-Canadian (76.4%), and was single/not in a committed relationship (51.5%). Further, most of the sample indicated that they currently did not have children (98%) but intended on having children in the future (80.9%). Please refer to Table 2.1 for additional participant demographics.

Table 2.1 Participant demographics for Study 1

Ethnicity (N = 204)	Frequency
White or Euro Canadian	155 (76.4%)
East Asian	10 (4.9%)
Black, Afro-Caribbean, or African Canadian	8 (3.9%)
First Nations or Metis	9 (4.4%)
South Asian	6 (3.0%)
Other (East Indian; Indian; South African; Southeast; Southeast Asian; Latino or Hispanic; Middle Eastern or Arab-Canadian; Mauritian-mixed)	15 (7.5%)
Relationship status N = 202	Frequency
Single (not in a committed relationship)	104 (51.0%)
Committed relationship	69 (34.2%)
Dating casually	17 (8.4%)
Married	6 (3.0%)
Cohabiting	4 (2.0%)
Divorced	1 (0.5%)

Note. Samples sizes differ due to participant non-responses.

Participants were recruited through the Psychology Participant Pool website (<http://usask.sona-systems.com>) and an advertisement posted on the Personalized Access to Web Services (PAWS) website bulletin page (<https://paws.usask.ca>) (see Appendix A the online advertisements). Participants recruited through the Psychology Pool website were compensated with a partial credit towards their Introductory Psychology course. An undergraduate sample was appropriate for Study 1 because this was an initial study examining the potential suitability of the SCM framework and these individuals are largely childless and members of the group most likely to delay childbearing (i.e., university-educated) and subsequently to access ART (i.e., educated, middle to upper class, Caucasian; Bitler & Schmidt, 2006; Johnson & Tough, 2012; Dougall et al., 2012; Neyer et al., 2013; Matthews & Hamilton, 2014). After reading the consent form and checking “yes” to signify their consent (see Appendix B for copies of the consent forms), participants completed an online self-administered questionnaire via Fluid Surveys. The questionnaire took approximately 20-30 minutes to complete and contained a total of 240 questions based on the components of the SCM (Fiske et al., 2002), targeting 15 categories of women (16 questions per category). The questionnaire can be found in Appendix C.

In order to replicate some of the past research, the following categories of women were rated by participants: stay-at-home mothers/homemakers; career women who work outside of the home; lesbians; single women who are not in a committed relationship; women who are

physically disabled; women who are on welfare; elderly women; rich women; homeless women; teen mothers; and, religious women. As a means of extending the SCM model into the realm of involuntarily childless women, participants also rated the following categories of women: 35-year-old women who have delayed childbearing; women faced with fertility issues due to an untreated sexually transmitted infection (STI); and, women faced with fertility issues due to a serious illness. In addition, a childfree category was included – voluntarily childless women. These categories were selected based on past research (e.g., Kopper & Smith, 2001; Fiske et al., 2002; Cuddy et al., 2004) and the current research questions pertaining to perceptions of involuntarily childless women. Examining the stereotypes placed on the previously established general categories of women allows for comparisons of the involuntarily childless categories. This aids in understanding the nuances of the stereotypes placed on involuntarily childless women. Upon completion of the questionnaire, participants were provided with a debriefing form that they had the option to print out for their own records (Appendix D). They were also instructed to contact the researchers if they had any questions or concerns.

2.4 Study 1 Materials

2.4.1 Stereotype Content Model items: Attributions and affective reactions. Because this was a preliminary investigation of the suitability of the SCM, a modified version of the abbreviated questionnaire used by Fiske and colleagues in their 2002 publication was employed. The abbreviated questionnaire included two items each to represent the competence and warmth traits based on the most reliable item-scale correlations from Fiske and colleagues' (2002) previous investigations. In their 2002 study, Fiske and colleagues asked participants to consider the perspectives of the American general population when considering varying social groups. To achieve close to direct replication of their method while considering the relevant context, participants in the current study were asked to consider the perspectives of the Canadian general population. Social stereotypes can be understood as a consensus of most of a given population regarding the characteristics of an individual member of a group or the group as a whole (Secord & Blackman, 1964; Devine, 1989). They can also be understood as “generalized expectations” (Van Langenhove & Harre, 1994). These stereotypes differ from personal stereotypes, which characterize a single individual's opinions about a target group (Secord & Backman, 1964; Devine, 1989), and self-stereotype which arise when individuals ascribe traits to others in the same manner as they would ascribe to themselves (Stewart et al, 1979). The validity of asking

participants to report about the beliefs of others is supported by the concepts of cultural consensus and cultural consonance. Cultural consensus theory assumes that individuals from a particular “culture” or social group share and can access a fixed knowledge base for questions that might be meaningful in a social context (Dressler et al., 2005). These shared meanings and knowledge bases have been labelled “cultural models” (see Holland & Quinn, 1987; D’Andrade & Strauss, 1992; D’Andrade, 1995; Strauss & Quinn, 1997). Cultural consonance then refers to the degree to which an individual can approximate cultural models that are widely shared with their own beliefs and behaviours (Dressler, Balieiro, & Dos Santos, 1997, 1998, 2002; Dressler & Bindon, 2000; Dressler, Ribeiro, Balieiro, Others, & Dos Santos, 2004; Dressler, 2004, 2005; Dressler, Balieiro, Ribeiro, & Dos Santos, 2007). The underlying assumption of the theory of cultural consonance is that culture (defined as the learned and shared knowledge required to function in a social group) is in fact learned and shared/distributed, but also the locus of culture is within both individuals and collective social groups (Dressler et al., 2007).

Overall, the modified questionnaire was designed to measure the components of the SCM (e.g., warmth, competence, status, competition, affective reactions) in relation to 15 categories of women. Using a 5-point scale (1 = *not at all* to 5 = *extremely*), participants were asked to rate each woman in terms of how confident, competent, sincere, and warm they believed most Canadians would perceive the groups to be. A composite/mean was created for both competence (confidence scores + competence scores/2) and warmth (sincere scores + warmth scores/2) for each category of women. Pearson r coefficients which reflect reliability for two-item scales are denoted in Table 3 below. The Pearson r coefficient is recommended for assessing reliability of two-item scales (Sainfort & Booske, 2000; Verhoef, 2003; Cramer, Atwood, & Stoner, 2006; O’Brien, Buikstra, & Hegney, 2008). Interpretation of r-values for scale reliability are as follows: values between 0 and +/-0.3 indicates a weak linear relationship; values between +/-0.3 and +/-0.7 indicate a moderate linear relationship; and, values between +/-0.7 and +/-1.0 indicates a strong linear relationship (Ratner, 2009). The r-values mostly fell within a moderate range indicating that the individual items representing each variable were somewhat measuring the same construct (Ratner, 2009). Participants were also asked to rate (1 = *not at all* to 5 = *extremely*) each woman in terms of how well-educated, economically successful, likely to get special breaks, and likely to receive resources over others they believed most Canadians would perceive the groups to be. A composite/mean was created for both status (well-educated scores +

economically successful scores/2) and competition (special breaks scores + resources over others scores/2) for each woman. Pearson *r* coefficients which reflect reliability are denoted in Table 2.2. Again, the reliability coefficients fell within a moderate to strong range (Ratner, 2009).

Table 2.2. Study 1 sample mean Pearson *r* coefficient values for the variables underlying competence, warmth, status, and competition composites

	Competence	Warmth	Status	Competition
Overall sample	0.53	0.70	0.61	0.84

In addition to examining the ratings of competence, warmth, status, and competition associated with each category of women, participants were asked to rate the affective reactions that each group elicited. Using a scale of 1 (*not at all*) to 5 (*extremely*), participants rated the extent to which they believed the women in each group made most Canadians feel proud, inspired, angry, resentful, envious, jealous, pity, and sympathy. Composites/mean scores were created for admiration (proud + inspired/2), contempt (angry + resentful/2), envy (envious + jealous/2), and pity/sympathy (pity + sympathy/2) for each category of women. Pearson *r* reliability coefficients are denoted in Table 2.3 below. These reliability coefficients also fell within a moderate to strong scale range (Ratner, 2009).

Table 2.3. Study 1 sample mean correlation coefficient values for the variables underlying the affective reaction variables

	Admiration <i>r</i>-value	Contempt <i>r</i>-value	Envy <i>r</i>-value	Pity/sympathy <i>r</i>-value
Overall sample	0.72	0.72	0.83	0.59

2.4.2 Personal demographics. In order to contextualize the findings, participants were also asked a series of personal demographic questions (see Appendix C). Specifically, participants were asked: their age; gender; Canadian citizenship identification and status; identified ethnicity; current relationship status; highest grade or year of school they completed; whether they have children; and whether they intend on having children in the future.

2.5 Study 1 Results

2.5.1 Testing hypothesis 1 and research question 1. In order to verify that the SCM is an appropriate model for examining stereotypes associated with involuntarily childless women, first the mean ratings for competence and warmth of each category of women were calculated,

then a median split for competence and warmth were calculated in order to create the quadrants, and finally repeated measures analysis of variance (ANOVAs) were calculated to verify the distinct ratings of competence and warmth each group received and the separation of the groups into each quadrant. It was expected that as with previous research on specific social groups (e.g., Fiske et al., 2002), groups of women/mothers would be similarly separated into the SCM quadrants (H1). It was also expected that the involuntarily childless women introduced for the present study would be allocated into differential SCM quadrants (RQ1).

2.5.2 Calculating means for competence and warmth. Mean ratings of competence and warmth were calculated for each of the 15 categories of women (see Table 2.4). Cluster analysis, which groups participants together based on their mean responses (Everitt, Landau, Leese, & Stahl, 2011) was used extensively by Fiske and colleagues (2002) in developing the SCM and testing the theory in various domains (e.g., Cuddy et al., 2009; Durante, Vaolpato, & Fiske, 2010). Because the SCM is well-established and I focused on testing hypotheses based on this theory, cluster analyses were not used. Instead, I employed a similar methodology to Cuddy, Fiske, and Glick (2004) which relied on mean comparisons.

Table 2.4. Competence and warmth means for the 15 groups of women

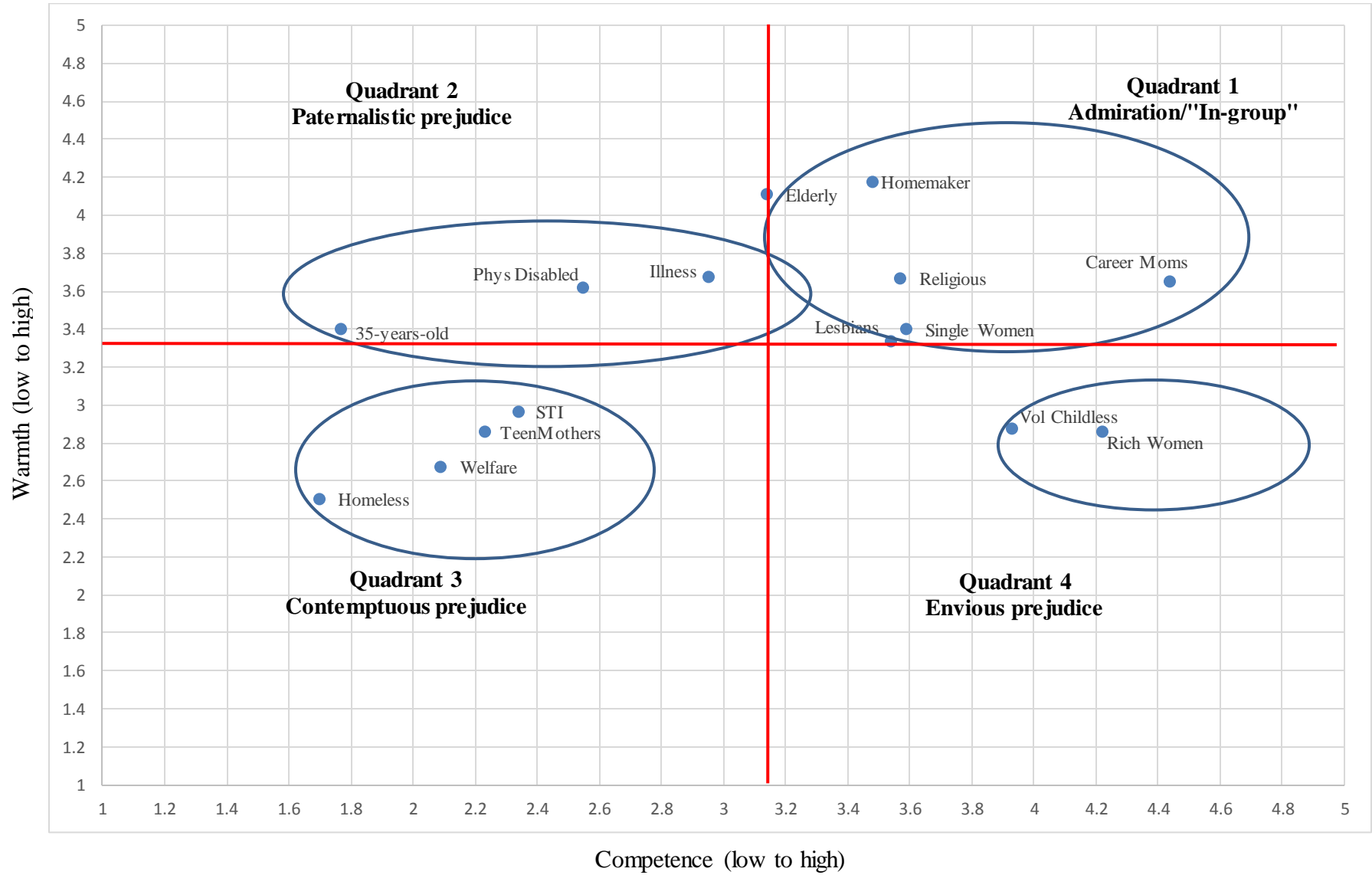
	Mean (SD)	
	Competence	Warmth
General social groups		
Homemaker women	3.48 (0.78)	4.18 (0.68)
Lesbian women	3.54 (0.80)	3.34 (0.79)
Single women	3.59 (0.80)	3.40 (0.77)
Career mothers	4.44 (0.67)	3.65 (0.86)
Teen mothers	2.23 (0.82)	2.86 (0.83)
Rich/wealthy women	4.22 (0.70)	2.83 (0.90)
Homeless women	1.70 (0.69)	2.51 (0.90)
Physically disabled women	2.55 (0.85)	3.62 (0.78)
Religious women	3.57 (0.82)	3.67 (0.83)
Welfare dependent women	2.09 (0.77)	2.68 (0.96)
Elderly women	3.14 (0.88)	4.11 (0.76)
Childless/childfree groups		
35-year-old women who delayed childbearing	1.77 (0.42)	3.40 (0.80)
Women with fertility issues due to an untreated STI	2.34 (0.83)	2.97 (0.90)
Women with fertility issues due to a serious illness	2.95 (0.73)	3.68 (0.76)
Voluntarily childless women	3.93 (0.83)	2.88 (0.95)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

2.5.3 Creating groupings via median split. Next, the median split values (the value representing the score at which half the sample falls above, and half falls below with respect to the variable in question) for competence and warmth for the entire sample were calculated. The median value for competence was 3.05, while the median value for warmth was 3.33. The median values were then used to delineate the quadrants and to create the quadrant boundaries, so that the groups were arrayed on a two-dimensional Competence x Warmth space (Figure 2.1). Groups who were above the competence and warmth median based on their competence and warmth means were allocated to Quadrant 1 (the “admired, in-group”), which included elderly women, homemakers, single women, career mothers, and religious women. Groups who were below the median for competence and above the median for warmth based on their competence and warmth means were allocated to Quadrant 2 (the “paternalistic group”), which included 35-year-old women who have delayed childbearing, physically disabled women, and women with fertility issues due to an illness. Groups who were below the medians for competence and warmth based on their means for competence and warmth were allocated to Quadrant 3 (the “contemptuous group”), which included women with fertility issues due to an untreated STI, homeless women, welfare dependent women, and teen mothers. Finally, those who were above the median for competence and below the median for warmth based on their competence and warmth means were allocated to Quadrant 4 (the “envious group”), which included lesbians, voluntarily childless women, and rich women. The allocation of the categories of women to each quadrant mostly aligned with what would be expected based on past research and provided initial support for H1, with the exception of elderly women, homemaker women, and career mothers who were all rated higher on competence and warmth compared to past research (e.g., Eckes, 2002; Fiske et al., 2002; Cuddy et al., 2009; Fiske, 2012).

2.5.4 Confirming separation of the groups based on mean ratings of competence and warmth. Quadrant means for competence and warmth were calculated (Table 2.5). To confirm the separation of the groups into the four SCM quadrants based on the means, repeated measures one-way ANOVAs were conducted using the quadrants as the grouping variables and competence and warmth as the dependent variables to statistically support the separation of the women based on their competence and warmth means. Assumptions for repeated measures one-

Figure 2.1. Study 1 two-dimensional depiction of mean ratings for warmth and competence for different categories of women separated by median splits of the variables



way ANOVA include: 1) independence of cases/groups/participants; 2) normality; and, 3) sphericity (population variances of all possible difference scores are equal). The assumption of independence is met by examining the research design and is confirmed for the current study. The assumption of normality is also met because the sample size is greater than 25. However, the assumption of sphericity was violated for many analyses, so the corrected Greenhouse-Geisser estimates of sphericity are reported when required.

Results suggested a main effect of quadrant for competence, $F(2.20, 471.05) = 916.99, p < .001, \eta^2 = 0.82$ (Table 6). The post hoc analyses indicated significant differences between the quadrants (all at $p < 0.001$), with the participants rating Quadrant 4 (envious group) as the most competent, followed by Quadrant 1 (in-group), Quadrant 2 (paternalistic group), and then Quadrant 3 (contemptuous group). These results all align with what would be expected based on the SCM and lends further support to H1. With respect to warmth, results suggested a main effect of quadrant, $F(2.68, 136.17) = 213.67, p < .001, \eta^2 = 0.52$. The post hoc analyses indicated significant differences between all the quadrants (at $p < 0.001$), whereby participants rated Quadrant 1 (in-group) as the warmest, followed by Quadrant 2 (paternalistic), Quadrant 4 (envious), and then Quadrant 3 (contemptuous). These results also align with the SCM and supports H1. Overall, H1 was supported with the caveat of homemakers and career mothers being considered part of the “in-group”. Further, RQ1 was addressed and supported the notion that the SCM could be applied to investigating involuntarily childless groups as these groups varied from one another and were allocated to different SCM quadrants.

Table 2.5. Competence and warmth means and standard deviations for each quadrant

	Competence	Warmth
Overall sample	3.04 (0.43)	3.32 (0.46)
Quadrant 1 (in-group)	3.65 (0.53)	3.79 (0.50)
Quadrant 2 (paternalistic)	2.44 (0.50)	3.56 (0.60)
Quadrant 3 (contemptuous)	2.10 (0.62)	2.75 (0.66)
Quadrant 4 (envious)	3.89 (0.57)	3.02 (0.68)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

2.6 Testing Hypothesis 2

Based on the SCM, it was expected that each quadrant would be associated with differing levels of status and competition. According to the SCM, status and competence should be positively correlated and status should be highest for the high competence quadrants (Quadrant 1

and 4), while competition and warmth should be negatively correlated and competition should be lowest for the high warmth quadrants (Quadrant 1 and 3). In order to test the second hypothesis, first means for status and competition were calculated and then the status and competition means for each quadrant were compared with repeated measures ANOVAs. To test the expected correlations posited by the SCM, correlations were examined between status and competence and then competition and warmth.

2.6.1 Ratings of status and competition of each quadrant. Sample and quadrant means for status and competition were calculated (Table 2.6). The sample means were calculated in order to verify the SCM assumption that status and competition are key variables underlying stereotypes. Following this, Pearson r correlations were calculated between status and competence as well as competition and warmth to verify the expected relationships among the variables as outlined by the SCM. As would be expected, a positive correlation between status and competence emerged ($r = 0.78, p < 0.01$) while a negative correlation between warmth and competition emerged ($r = -0.41, p < 0.01$).

Next, repeated measures one-way ANOVAs were calculated using the quadrants as the independent variables with status and competition as dependent variables. Results suggested a main effect of quadrant for status, $F(2.36, 441.73) = 887.90, p < .001, \eta^2 = 0.82$. The post hoc analyses indicated significant differences between almost all the quadrants, with the participants rating Quadrant 4 (envious group at $p < 0.001$) as having the highest status, followed by Quadrant 1 (in-group) and Quadrant 2 (paternalistic group) (both at $p < 0.001$ compared to other quadrants, with no statistical difference between them), and then Quadrant 3 (contemptuous group at $p < 0.001$). With respect to competition, results suggested a main effect of quadrant, $F(2.18, 40.83) = 41.11, p < .001, \eta^2 = 0.17$. The post hoc analyses indicated significant differences between almost all of the quadrants, with participants rating Quadrant 4 (envious) and Quadrant 3 (contemptuous) as the greatest sources of competition (both at $p < 0.001$ compared to other quadrants, with no statistical difference between them), followed by Quadrant 1 (in-group at $p < 0.001$), and Quadrant 2 (paternalistic at $p < 0.001$). Overall, these results align with the SCM and support H2.

Table 2.6. Status and competition means and standard deviations for each quadrant

	Status	Competition
Overall sample	3.10 (0.35)	2.63 (0.69)
Quadrant 1(admiration)	3.40 (0.43)	2.54 (0.77)
Quadrant 2 (paternalistic)	3.40 (0.48)	2.30 (0.74)
Quadrant 3 (contemptuous)	1.89 (0.58)	2.78 (0.88)
Quadrant 4 (envious)	3.90 (0.46)	2.88 (1.01)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

2.7 Testing Hypothesis 3

Based on the SCM, it was predicted that each quadrant will elicit distinct affective reactions. To test this hypothesis, first the affective reaction means for each quadrant was calculated then statistical comparisons between the means were analyzed with repeated measures ANOVAs.

2.7.1 Measuring and comparing affective reactions for each quadrant. It was hypothesized that Quadrant 1 would elicit higher levels of admiration than the other quadrants, while Quadrant 2 would elicit higher levels of pity/sympathy, Quadrant 3 would elicit higher levels of contempt, and Quadrant 4 would elicit high levels of envy (H3). To examine this hypothesis mean affective reactions for each quadrant were calculated and are presented in Table 8 below.

Next, repeated measures one-way ANOVAs were calculated to compare the quadrants on each affective reaction (i.e., admiration, pity/sympathy, contempt, envy). The affective reaction means for each quadrant are denoted in Table 2.7. Results suggested a main effect of quadrant for admiration, $F(3, 196) = 550.50, p < .001, \eta^2 = 0.74$. The post hoc analyses indicated significant differences between all the quadrants (each at $p < 0.001$), with the participants rating Quadrant 1 (in-group) as the most admired, followed by Quadrant 4 (envious), Quadrant 2 (paternalistic), and then Quadrant 3 (contemptuous). Results also suggested a main effect of quadrant for pity/ sympathy, $F(2.28, 291.42) = 339.84, p < .001, \eta^2 = 0.64$. The post hoc analyses indicated significant differences between all the quadrants (each at $p < 0.001$), with the participants rating Quadrant 2 (paternalistic) as the most pitied, followed by Quadrant 3 (contemptuous), Quadrant 1 (in-group), and then Quadrant 4 (envious). There was also a main effect of quadrant for contempt, $F(2.70, 131.30) = 157.95, p < .001, \eta^2 = 0.64$. The post hoc analyses indicated significant differences between almost all the quadrants, with the participants

rating Quadrant 3 (contemptuous) and Quadrant 4 (envious) as eliciting the most contempt (both at $p < 0.001$ compared to other quadrants, with no statistical difference between them), followed by Quadrant 1 (in-group) and Quadrant 2 (paternalistic) (both at $p < 0.001$ compared to other quadrants, and at $p < 0.05$ compared to each other). Finally, results suggested a main effect of quadrant for envy, $F(2.13, 180.55) = 242.42, p < .001, \eta^2 = 0.56$. The post hoc analyses indicated significant differences between all the quadrants (each at $p < 0.001$), with the participants rating Quadrant 4 (envious) as eliciting the most envy, followed by Quadrant 1 (in-group), Quadrant 2 (paternalistic), and then Quadrant 3 (contemptuous). Overall, these results supported H3 and the principles of the SCM.

Table 2.7. Affective reaction means and standard deviations for each quadrant

	Admiration	Pity/Sympathy	Contempt	Envy
Quadrant 1 (in-group)	3.43 (0.60)	2.56 (0.65)	2.06 (0.58)	2.37 (0.59)
Quadrant 2 (paternalistic)	2.77 (0.75)	3.63 (0.58)	1.95 (0.73)	1.70 (0.68)
Quadrant 3 (contemptuous)	1.55 (0.59)	3.40 (0.70)	2.86 (0.78)	1.50 (0.64)
Quadrant 4 (envious)	3.09 (0.68)	2.13 (0.62)	2.77 (0.74)	2.69 (0.58)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

2.8 Study 1 Discussion

The intent of Study 1 was to determine the appropriateness of the SCM as a model for examining differential stereotypes of involuntarily childless women. Based on the results, the SCM appears to be well-suited for distinguishing between these types of women. Each involuntarily childless woman fell into a distinct SCM quadrant. Yet, none of the involuntarily childless groups or even the childfree women were considered part of the “admired/in-group” (Quadrant 1), which aligns with the concept of the “motherhood mandate” (Russo, 1976). Compared to parents, childless/childfree women (regardless of the reason for their childlessness) tend to receive more negative evaluations (Koropecj-Cox et al., 2007; Reed, 2012). These negative judgments have been explained by cultural expectations for women to pursue motherhood (McQuillan et al., 2008; Settle & Brumley, 2014). When a woman’s childless state is voluntary, this tends to evoke more negative reactions (Copur & Koropecj-Cox, 2010; Vinson et al., 2010; Koropecj-Cox et al., 2015; Koropecj-Cox et al., 2018). Some of the negative evaluations voluntarily childless women have received include being labelled as materialistic, selfish, self-absorbed, immature, less loving, carefree, indifferent, less altruistic, less humanitarian, child-haters, too career-oriented, irresponsible, unwomanly, immoral, and

abnormal (Argillo & Nelini, 2008; Copur & Koropecj-Cox, 2010; Rich et al., 2011; Koropecj-Cox et al., 2015; Peterson et al., 2015). While involuntarily childless women are usually not perceived quite as negatively compared to voluntarily childless women, they do not receive particularly positive evaluations overall. Compared to parents, involuntarily childless women have been described as less likable, caring, warm, kind, nurturing, less emotionally healthy, traditional, and feminine (Koropecj-Cox et al., 2015). Involuntarily childless individuals are often highly aware of these negative evaluations and report experiencing depression, anxiety, relationship problems, guilt, and self-blame for their childless state (Peterson & Engwall, 2013; Zurlo et al., 2017).

Based on the literature regarding childlessness, the allocation of the voluntarily childless woman to Quadrant 4 (envious) is fitting, as this stereotype quadrant tends to include social groups who are respected for their agency and competence but disliked for their perceived lack of warmth and adherence to traditional gender stereotypes (Glick & Fiske, 2001a,b; Fiske et al., 2002; Glick, 2002). Quadrant 4 membership also tends to be associated with expectations that such groups are high in power and socioeconomic status and thus sources of competition (Fiske et al., 2002), which aligns with judgements of voluntarily childless individuals who are often viewed as too career-oriented and materialistic (Copur & Koropecj-Cox, 2010; Rich et al., 2011; Koropecj-Cox et al., 2015; Peterson et al., 2015).

With respect to the 35-year old woman who delayed childbearing who was allocated to Quadrant 2 (paternalistic prejudice) and one of the most pitied groups, participants may have imagined a woman who was not competent enough to follow the expected life course for women or to recognize that having a child later in life can pose potential health risks for both mother and baby, but still found her warm because of her intentions to become a mother. There is evidence that delayed childbearing has become more normative for some women (Umberson et al., 2010; Martin et al., 2014; Matthews & Hamilton, 2014; Koert & Daniluk, 2017). However, when women are perceived as temporarily rather than permanently childless, they tend to be rated more positively (Koropecj-Cox et al., 2007) providing evidence for the strong social norms around motherhood. The woman with an unspecified illness was also rated low on competence but high on warmth and so was allocated to Quadrant 2 and rated high on pity/sympathy. The stigma of illness and disease has been strongly supported in the literature (e.g., Knapp, Marziliano, & Moyer, 2014; Weiss et al., 2014; Dong-Ling Wang et al., 2015). Further, illness or

disease is often considered a disability (Office of National Statistics, 2015; Retief & Letsosa, 2018). Groups with disability tend to be perceived as low-status and receive ambivalent evaluations of high warmth and low competence (Fiske et al., 2002; Cuddy, Fiske, & Glick, 2007; Louvet, Rohmer, & Dubois, 2009; Louvet & Rohmer, 2010). However, it has been suggested that the positive evaluation of warmth bestowed on people with disability may be the result of participants' efforts to appear unprejudiced (Damburn & Guimond, 2004; Rohmer & Lovet, 2012). Pitying people for an illness is common, especially in cases where a person is seen as suffering from something outside of their control (Post et al., 2014; Corrigan, 2017), so the affectional reactions elicited by the unexplained illness childless group were expected. The pity/sympathy elicited by the 35-year-old, delayed childbearing group could potentially be explained by participants' awareness that postponement of parenthood has become a necessary social norm (Umberson et al., 2010; Martin et al., 2014; Matthews & Hamilton, 2014; Koert & Daniluk, 2017). For example, delayed childbearing is often required when one pursues an education and career (Ravanera & Beaujot, 2014; Waldenstrom, 2016) or when an ideal mate has not yet been found (Sorensen et al., 2016; Berrington, 2017; Jalovaara & Fasang, 2017). As such, the 35-year-old group may have been viewed as less in control and responsible for their childless situation and thus worthy of pity/sympathy (Kopper & Smith, 2001). Participants may also have pitied this group because they have not yet been able to achieve what is expected of women – motherhood.

The allocation of the woman with fertility issues due to an untreated STI to Quadrant 3 (contemptuous) strongly aligned with past literature. Quadrant 3 membership tends to include groups lowest on the socioeconomic ladder who have no positive social influence and are assumed to be “parasitic leeches” who exploit publicly funded social programming (Fiske et al., 2002), which aligns with assumptions about many people who are afflicted with STIs. Negative evaluations and stigma of those with STIs have been well-documented in the literature worldwide (e.g., Campbell, Nair, Maimaine, & Nicholson, 2007; Young, Nussbaum, & Monin, 2007; Nack, 2008; Foster & Byers, 2013) with apparently no difference based on whether the illness is curable (e.g., chlamydia and gonorrhea) or chronic (e.g., herpes) (Darocch, Myers, & Cassell, 2003; Kangas, Andersen, Olesen, Moller, & Ostergaard, 2006). Common stereotypes associated with people who have STIs include “slut”, “dirty”, “immoral”, and “promiscuous” – all labels said to signify deviant, immoral, dangerous, and discreditable sexual behaviour

(Fortenberry, 2004; Young et al., 2007; Nack, 2008; Foster & Byers, 2013). There also appears to be a sexual double standard whereby women are more likely to be stigmatized and receive negative evaluations for contracting an STI compared to men (Crawford & Popp, 2003; Lichtenstein, 2003; Smith, Mysak, & Michael, 2008; East et al., 2012) potentially because they violate social rules regarding appropriate sexual behaviour (Fortenberry, 2004; Smith et al., 2008). The act of shaming or devaluing individuals based on their sexual behaviour or STI status may lead to serious negative implications, such as decreased likelihood of being screened and treated for STIs like chlamydia and gonorrhea (Young et al., 2007; Cunningham, Kerrigan, Jennings, & Ellen, 2009), which in turn can lead to decreased fertility by way of damage to reproductive organs (Tsevat, Wiesenfeld, Parks, & Peipert, 2017). Shaming or devaluing based on STI status may also lead individuals to conceal the origin of their fertility issues or even hide their issues altogether. As previously noted, individuals who hide their involuntarily childless status from others risk experiencing distress, loss of self-esteem, loss of self-efficacy (Sternke & Abrahamson, 2014) as well as being assumed as voluntarily childless (Remennick, 2000; Park, 2002; Bulcroft & Teachman, 2003; Gillespie, 2003).

Although Quadrant 3 elicited the most contempt and Quadrant 4 elicited the most envy from participants compared to the other quadrants, all the quadrant means for these affective reactions were below the scale midpoint, suggesting that participants did not feel particularly envious or contemptuous towards any of the women within the quadrants. Past studies using the SCM have also elicited envy and contempt means that were below the midpoint (e.g., Fiske et al., 2002). Feeling envious generally means admiring someone, while at the same time feeling resentful towards them (Wolf & Glick, 2016). With respect to the Quadrant 4, it is possible that participants did not wish to be without children or negatively judged as many voluntarily childless women. Indeed, few individuals intend to be voluntarily childless (i.e., around 7 to 9%; Edmonston, Lee, & Wu, 2008; Ravanera & Roderic, 2009). Regarding Quadrant 3, participants may have lacked strong feelings of anger and resentment towards the women faced with fertility issues due to an STI because the pity they felt for them predominated. Indeed, mean ratings of pity for this group were above the scale midpoint.

In sum, my hypotheses were nearly all supported which strongly suggests that the SCM is an appropriate model for investigating the stereotypes associated with involuntarily childless women. When the general social categories were modified to reflect women and mothers, the

SCM was still useful in separating the groups into the distinct stereotype quadrants. Further, the SCM was effective in separating groups based on fertility and childbearing grounds whereby the involuntarily childless groups and the voluntarily childless women were distinguished into distinct stereotype quadrants. While this initial study was useful for examining the suitability of the SCM to examine stereotypes related to involuntarily childless groups, questions regarding the potential social sanctions placed on each category have not yet been examined. As such, Weiner's framework was adopted for the next investigation. This framework suggests that when an observer perceives someone in a situation where they may need assistance, the observer engages in an attribution process whereby their assessment of locus, stability, and control of the situation elicits an emotional response toward the person in need. In turn, this response determines the observer's willingness to help that person. In the subsequent study, the categories of women was also narrowed to only those which desire children and are faced with fertility issues in order to more precisely examine my main research purpose which is to examine the stigma and stereotyping related to involuntarily childless women. A final limitation to address in Study 2 was to alter the wording of some questionnaire items. In the current study, the questionnaire was modelled primarily after the one employed by Fiske et al. (2002), which examined social stereotypes (e.g., how does the public feel) rather than personal beliefs (e.g., what do you personally believe). However, knowledge of social stereotypes tends to be less accurate in predicting overall attitudes and behaviours compared to assessing individuals' personal beliefs (Kunda, 1999). Further, some researchers have found that social stereotypes tend to be more negative compared to personal beliefs (Heider, Scherer, & Edlund, 2013). As such, the elicitation of personal beliefs was assessed in Study 2 to examine whether this would result in differential assessments of the groups of women compared to the elicitation of social stereotypes.

CHAPTER 3. STUDY 2

3.1 Study 2 Purpose

In Study 1, the primary goal was to determine whether the SCM is an appropriate model for examining the differential stereotypes applied specifically to involuntarily childless women. The next step was to further test the suitability of the SCM for examining stereotypes of these groups and examine the potential behavioural outcomes/social sanctions associated with these stereotypes within the framework of Weiner's attribution-affect-action (AAA) model of helping behaviour (Schmidt & Weiner, 1988; Weiner, 1980). Participants were asked to rate different categories of women that represented diverse contexts of infertility or reproductive challenges and encompassed different potential loci of control for infertility/reproductive challenges. In line with the overall focus of my dissertation, the "action" or behavioural consequences component of Weiner's theory comprised various indices of support for the inclusion of ART in Canada's healthcare system as each of the women rated by participants was arguably someone who might intend to access this option to overcome their biologically childless state. As such, the involuntarily childless contexts focused on instances of age-related decline in fertility due to actual or potential delayed childbearing, advanced maternal age, secondary infertility, reproductive organ scarring due to infection, illness-induced fertility problems, and circumstantial reproductive challenges due to not having a male partner. The specific categories of women included: a 35-year-old woman who is trying to conceive her first child, but is experiencing fertility problems; a woman who is experiencing fertility problems due to an untreated sexually transmitted infection; a woman who is experiencing fertility problems due to a serious illness that left her infertile; a lesbian who is trying to conceive a child; a single (not in a committed relationship) woman who is trying to conceive a child; a 40-year-old woman who is trying to conceive her first child and experiencing fertility problems; a woman with one biological child who is trying to conceive a second, but is experiencing fertility problems; and, a 28-year-old woman who is trying to conceive her first child but is experiencing fertility problems.

In order to address the question wording limitation noted for Study 1 and to further validate the appropriateness of the SCM for examining stereotypes related to involuntarily childless women the current study elicited the personal beliefs of participants rather than social stereotypes. The elicitation of personal beliefs is assumed to be more accurate in predicting

attitudes and behaviours (Kunda, 1999) and more positive (Heider et al., 2013) compared to eliciting social stereotypes. As with Study 1, participants rated the perceived competence and warmth of different categories of involuntarily childless women to determine which stereotype quadrant characterized each group (e.g., paternalistic, admiration), as well as the affective reactions elicited by the women (e.g., pity, admiration). Participants also rated the perceived responsibility/blame for the fertility status of the women, perceived quality of mothering (i.e., good mother), and provided ratings on various indices of support/helping behaviour.

3.1.1 A reminder of Weiner's AAA model of helping behaviour. Numerous examinations of attributions for outcomes have concluded that social observers hold individuals more to blame for a 'socially undesirable' condition when it is perceived as being under their control (Turnquist, Harvey, & Anderson, 1988). Attitudes toward such individuals are more likely to be negative (Richardson, 1993), and these individuals are less likely to receive support, positive judgements, and social rewards from others (Ickes & Kidd, 1976; Lawson, 2003; Weiner, 1979). According to the AAA model (Schmidt & Weiner, 1988; Weiner, 1980), emotional reactions of the observer can mediate the relationship between causal attributions and reactions. Specifically, a state that is viewed as uncontrollable arouses sympathy, which evokes a prosocial response, while attributing a situation to factors under the individual's control arouses negative emotions (irritation and anger) which is likely to evoke a punishing or discriminatory response. Following the logic of the AAA model, attributing a woman's fertility challenges to internal, controllable factors (e.g., she delayed having children until it was "too late") should be associated with higher stigma, more negative emotional responses, harsher judgements, and greater social censure directed toward the woman than would ascribing it to factors out of the woman's control.

3.2 Study 2 Research Questions and Hypotheses

The specific hypotheses and research questions for this study included the following:

Hypothesis 1 (H1): It was expected that the involuntarily childless women would vary in terms of rated warmth and competence and fall into differential SCM quadrants.

Hypothesis 2 (H2): The quadrants will be associated with differing levels of status and competition, as outlined by the SCM.

H2a: Quadrant 4 will elicit higher ratings of status and Quadrant 3 lower levels of status.

H2b: Quadrants 3 and 4 will elicit higher ratings of competition compared to Quadrants 1 and 2.

Hypothesis 3 (H3): As predicted by the SCM, each quadrant will elicit distinct affective reactions.

H3a: Quadrant 1 will elicit the most admiration.

H3b: Quadrant 2 will elicit the most pity/sympathy.

H3c: Quadrant 3 will elicit the most contempt.

H3d: Quadrant 4 will elicit the most envy.

Hypothesis 4 (H4): As the dominant social constructions of “good mothering” presume a woman has both high competence (i.e., can effectively raise her child) and high warmth (i.e., is nurturing) (Delhi, 1996; Hays, 1996; Ruddick, 2001; O’Reilly, 2004), I expected that women in Quadrant 1 (admiration, in-group) would receive the highest “good mother” ratings compared to all of the other quadrants.

Hypothesis 5 (H5): Based on Weiner’s AAA model, I expected that the quadrants would receive differential ratings of responsibility/blame for their fertility issues depending on the perceived locus of control for their plight.

H5a: Quadrants 3 and 4 will receive higher ratings of responsibility/blame compared to the other quadrants.

H5b: Quadrants 1 and 2 will receive lower ratings of responsibility/blame compared to the other quadrants.

Hypothesis 6 (H6): As outlined by Weiner’s AAA model, I expected ratings of responsibility/blame to be negatively correlated with ratings of sympathy. I also expected ratings of both blame/responsibility and pity/sympathy to be positively correlated with support/helping behaviour.

Hypothesis H7 (H7): As predicted by Weiner’s AAA model, I expected that the quadrants would receive differential ratings of support/helping behaviour.

H7a: Quadrants 3 and 4 will receive lower ratings of support/helping behaviour compared to the other quadrants.

H7b: Quadrants 1 and 2 will receive higher ratings of support/helping behaviour compared to the other quadrants.

3.3 Study 2 Participants and Procedure

The current study was approved by the University of Saskatchewan Research Ethics Board (Beh #16-294). One hundred and ninety-five individuals (31 males, 161 females, 1 “prefer not to disclose”, 2 no response) from the University of Saskatchewan with a mean age of 22.02 years ($SD = 6.03$; range = 17 to 46) participated in Study 2. Most of the sample was born in Canada (83.1%), identified as Canadian (95.4%), identified as white or Euro-Canadian (71.8%), and was currently in an undergraduate program (53.9%). The majority of the sample identified either with the Liberal Party of Canada (42.9%) or Conservative Party of Canada (30.4%) and identified as single/not in a committed relationship (45.6%) or in a committed relationship (35.7%). Almost the entire sample indicated that they currently did not have children (95.3%), but many intended on having children in the future (82.7%). When asked how likely it is that they would access medical fertility treatments if they were personally having trouble conceiving a child in the future, about two-thirds of the sample indicated that they were either *likely* (37.4%) or *extremely likely* (32.8%) to access treatments. Please refer to Tables 3.1 and 3.3 for a complete breakdown of the participant demographics and responses. An undergraduate sample was appropriate for the present study because these individuals are at the beginning of their reproductive lives and may already be making decisions about when and if to have children of their own. For those who are postponing parenthood and focusing on educational attainment, career development, and/or obtaining financial security, many may be at risk of personally facing reproductive/fertility challenges due to the age-related declines in female fertility (Karmon et al., 2011; Boivin et al., 2013; Koert, 2014; Habbema et al., 2015; Koert & Daniluk, 2017). As such, this sample is one which may be comprised of individuals who assume they will be successful in having biological children one day, when the reality is that many may be at risk for becoming involuntarily childless (Karmon et al., 2011; Koert, 2014; Koert & Daniluk, 2017).

Table 3.1. Participant demographics for Study 2

Ethnicity $N = 195$	Frequency
White or Euro Canadian	140 (71.8%)
East Asian	19 (9.7%)
South Asian	10 (5.1%)
Middle Eastern or Arab Canadian	9 (4.6%)
First Nations or Metis	6 (3.1%)
Other (Afro-Asian; Black; Afro-Caribbean; African Canadian; Chinese-Canadian; Chinese-German; Filipino; Latino or Hispanic; Asian/White; Mixed; South-East Asian; Vietnamese)	11 (5.6%)

Table 3.2. Participant demographics for Study 2 (continued)

Political Party N = 191	Frequency
Liberal Party of Canada	82 (42.9%)
Conservative Party of Canada	58 (30.4%)
New Democrat Party (NDP)	28 (14.7%)
Green Party of Canada	13 (6.8%)
None	4 (2.1%)
Bloc Quebecois	1 (0.5%)
Other (don't know; not one in particular; hybrid between Liberal and NDP)	3 (1.6%)
Religious affiliation N = 194	
Christianity (e.g., Roman Catholic, United Church, Anglican, Lutheran, Pentecostal, Ukrainian Catholic, Baptist)	94 (48.5%)
Atheism	35 (18.0%)
Agnostic	32 (16.5%)
Other (Buddhist; Islam (Muslim); Hindu; "It's complicated"; Mennonite; Mormon; None; Non-denominational; Presbyterian; Secular Humanist; Sikh; Ukrainian Orthodox; Wiccan)	30 (15.5%)
Relationship status N = 193	Frequency
Single (not in a committed relationship)	88 (45.6%)
Committed relationship	69 (35.8%)
Married	14 (7.3%)
Dating casually	11 (5.7%)
Other (e.g., living together, common-law spouse, open common-law, separated)	11 (5.7%)

Table 3.3. Study 2 Participant responses regarding likelihood of accessing medical fertility treatments if they were personally having trouble conceiving in the future

Response N = 195	Frequency
Extremely likely	64 (32.8%)
Likely	73 (37.4%)
Neither likely not unlikely	26 (13.3%)
Unlikely	26 (13.3%)
Not at all likely	6 (3.1%)

Participants were recruited through the Psychology Participant Pool website (<http://usask.sona-systems.com>) as well as with an advertisement posted on the Personalized Access to Web Services (PAWS) website bulletin page (<https://paws.usask.ca>) (see Appendix E for copies of the online advertisements) and received partial credit within their Introductory Psychology course. After providing consent by clicking "yes, I consent" (see Appendix F for copies of the consent forms), participants completed an online self-administered questionnaire via Fluid Surveys (Appendix G). The questionnaire took between 20 to 30 minutes to complete.

Upon completion of the questionnaire, participants were directed to a debriefing form which explained the study further (Appendix H).

The questionnaire for Study 2 was similar to the one used in Study 1, however, two revisions are worth noting: 1) In addition to items targeting SCM components, the questionnaire included items designed to elicit behavioural reactions to the various categories of involuntarily childless women based on Weiner's AAA model; and, 2) The wording of specific items was revised to measure personal reactions to the targeted groupings of women. Rather than examine social stereotypes (e.g., how does the public feel) as in Study 1, personal beliefs (e.g., what do you personally believe) were examined in the current study for two main reasons: 1) Elicitation of social stereotypes tends to result in less accurate predictions of overall attitudes and behaviours compared to assessing individuals' personal beliefs (Kunda, 1999); and, 2) elicitation of social stereotypes tends to yield more negative responses compared to asking participants about their personal beliefs (Heider et al., 2013).

3.4 Study 2 Materials

3.4.1 Stereotype Content Model items: Attributions and affective reactions. The questionnaire employed in the current study was similar to that used in Study 1. Participants were asked to consider each category of woman and how they personally view individuals from that group in terms of the SCM components of competence, warmth, status, and competition. Using a 5-point scale (1 = not at all to 5 = extremely), participants were asked to rate each woman in terms of how confident, competent, sincere, and warm they perceived them to be. A composite/mean score was created for both competence (confidence scores + competence scores/2) and warmth (sincere scores + warmth scores/2) for each category of woman. Pearson r coefficients which reflect reliability are denoted in Table 3.4 below. Participants also rated (1 = not at all to 5 = extremely) each woman in terms of how well-educated, economically successful, likely to get special breaks, and likely to receive resources over others they personally believed them to be. A composite/mean was created for status (well-educated scores + economically successful scores/2) and competition (special breaks scores + resources over others scores/2) for each woman. Overall, the Pearson r reliability coefficient values suggest the variables were strongly measuring the same construct (Guildford, 1956), however the value for competence suggests that the variables were less cohesive.

Table 3.4. Sample mean Pearson *r* coefficient values for the variables underlying competence, warmth, status, and competition composites

	Competence	Warmth	Status	Competition
Overall sample	0.65	0.92	0.88	0.89

Additionally, participants were asked to indicate the affective reactions elicited by members of each group. Using a scale of 1 (*not at all*) to 5 (*extremely*), participants rated the extent to which they believed the women in each group made them personally feel proud, inspired, angry, resentful, envious, jealous, pity, and sympathy. Composites/mean scores were created for admiration (proud + inspired/2), contempt (angry + resentful/2), envy (envious + jealous/2), and pity/sympathy (pity + sympathy/2) for each category of women. Pearson *r* coefficients which reflect reliability are listed in Table 3.5. The Pearson *r* reliability coefficients for admiration and envy suggest the variables were measuring the same construct (Guildford, 1956). However, contempt and pity/sympathy appeared less cohesive.

Table 3.5. Correlation values for the variables underlying the affective reaction composites

	Admiration <i>r</i> -value	Contempt <i>r</i> -value	Envy <i>r</i> -value	Pity/Sympathy <i>r</i> -value
Overall sample	0.90	0.73	0.82	0.60

3.4.2 Additional attributions: Perceived mothering competence and responsibility for fertility issues. Participants were asked to rate the extent to which they thought a woman representative of each category would be a: competent mother; nurturing mother; capable mother; hard-working mother; and, loving mother using a five-point scale (1 = *not at all* to 5 = *extremely*). The responses to these items were then averaged to create a composite scale representing the construct of “good mother”. This scale was developed for the purposes of this dissertation and pilot tested in Study 2. Scale items were developed through consultation with the literature on ideal motherhood attributes which largely focus on competence and nurturance (Krane & Davies, 2007; Goodwin & Huppatz, 2010b). To assess the attributions of responsibility, participants were asked to what extent they personally believed that each woman was: responsible for her fertility problems; to blame for her fertility problems; at fault for her fertility problems; and, personally accountable for her fertility problems using a five-point scale (1 = *not at all* to 5 = *extremely*). The responses to these items were then averaged to create a composite score reflecting attributions of the “responsible for fertility issues” construct. This

scale was also developed for the purposes of this dissertation and pilot tested in Study 2. The words responsibility and blame were first considered then synonyms of these terms were also included. Cronbach's alpha reliability coefficients are denoted in Table 3.6 for the "good mother" and "responsible for fertility issues" constructs. Acceptable values of alpha range from 0.70 to 0.95 (Bland & Altman, 1997; DeVillis, 2003). Both values fell within a good scale range (Bland & Altman, 1997; DeVillis, 2003).

Table 3.6. Study 2 Cronbach's alpha values for the "good mother" and "responsible for fertility issues" composites

	Good mother α	Responsibility α
Overall sample	0.92	0.79

3.4.3 Helping behaviour/support. To explore potential differential support for access to medical fertility treatment across the involuntarily childless categories, the participants were asked the extent to which they agreed that a woman representative of each category should have access to fertility treatments (e.g., in vitro fertilization, donor insemination, hormonal therapy, etc.) using a five-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Participants were also asked the extent to which they believed women within the categories are deserving of receiving fertility treatments under Canada's universal healthcare net (1 = *very undeserving* to 5 = *very deserving*). As another behavioural index, participants were asked two questions targeting the degree of personal willingness to provide financial support to women within the various categories. First, participants were asked how supportive they would be of an increase in their yearly taxes to ensure that the cost of fertility treatments for each woman could be covered under Canada's universal health care net (1 = *very unwilling* to 5 = *very willing*). Second, they were asked to indicate how willing they would be to donate money to a woman personally raising money through online means (e.g., Go Fund Me) for medical fertility treatments (1 = *very unwilling* to 5 = *very willing*).

3.4.4 Personal demographics. To contextualize the results, participants were asked a series of personal demographic questions (Appendix G). Specifically, they were asked to report on: their age; their gender; their Canadian citizenship identification and status; their identified ethnicity; their identified Canadian political party; their identified religious affiliation; their current relationship status; the highest grade or year of school completed by both parents;

whether or not they have children; whether or not they intend on having children in the future; and, their intentions to access medical fertility treatments in the future.

3.5 Study 2 Results

3.5.1 Testing hypothesis 1. To verify the separation of the women into the differential SCM quadrants, first the competence and warmth mean ratings for each group were calculated. Following this, a median split for competence and warmth were calculated. I expected the women to be separated into the SCM quadrants based on differential ratings of competence and warmth (H1).

3.5.2 Calculating means for competence and warmth. Mean ratings of competence and warmth were calculated for each of the women (Table 3.7). Based on these means and the scale midpoints, the women with an untreated STI and a serious illness were allocated to Quadrant 2 (paternalistic) while all of the other women were allocated to Quadrant 1 (admiration, in-group).

Table 3.7. Competence and warmth means and standard deviations for each woman (N = 195)

Group	Competence	Warmth
35-year-old woman	3.43 (0.88)	3.84 (0.76)
Untreated STI	2.59 (0.92)	3.22 (0.96)
Serious illness	2.89 (0.88)	3.81 (0.81)
Lesbian woman	3.79 (0.84)	3.97 (0.79)
Single woman	3.85 (0.91)	3.77 (0.83)
40-year-old woman	3.30 (0.96)	3.84 (0.84)
Mother wanting a second child	3.67 (0.74)	4.00 (0.72)
28-year-old woman	3.50 (0.86)	3.90 (0.72)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

3.5.3 Creating groupings via median split. The median split for competence and warmth for the entire sample were calculated as a method for further differentiating the categories of women. The median value for competence was 3.25, and the median value for warmth was 3.75. The median values were used to create the quadrant boundaries, so that with the means for competence and warmth the groups were arrayed on a two-dimensional Competence x Warmth space (Figure 3.1). Groups who were above the competence and warmth median based on their competence and warmth means were allocated to Quadrant 1 (the “admired, in-group”), which included the woman with one biological child who is trying to achieve a second, 28-year-old woman who is trying to conceive her first child, single woman who is trying to conceive a child, 35-year-old woman, 40-year old woman, and lesbian woman.

Groups who were below the median for competence and above the median for warmth based on their competence and warmth means were allocated to Quadrant 2 (the “paternalistic group”). This quadrant included the woman with fertility issues due to an illness. Finally, groups who were below the medians for competence and warmth based on their means for competence and warmth were allocated to Quadrant 3 (the “contemptuous group”), which included the woman with fertility issues due to an untreated STI. No groups were allocated to Quadrant 4 (the “envious group”).

3.5.4 Confirming separation of the groups based on mean ratings of competence and warmth. Quadrant means for competence and warmth were calculated (Table 3.8). To confirm the separation of the groups into the three SCM quadrants based on the means and to ensure that the groups are conceptually different, repeated measures one-way ANOVAs were calculated for each quadrant with competence and warmth as dependent variables to statistically support the separation of the groups. As with Study 1, the corrected Greenhouse-Geisser estimates of sphericity are reported when required. Results suggested a main effect of group for competence, $F(1.89, 356.42) = 155.21, p < .001, \eta^2 = 0.45$. The post hoc analyses indicated significant differences between the quadrants (all at $p < 0.001$), with the participants rating Quadrant 1 (admiration group) as the most competent, followed by Quadrant 2 (paternalistic group), and then Quadrant 3 (contemptuous group). These results all align with what would be expected based on the SCM and lends further support to H1. With respect to warmth, results suggested a main effect of group, $F(1.67, 307.34) = 84.81, p < .001, \eta^2 = 0.32$. The post hoc analyses indicated significant differences between all the quadrants (all at $p < 0.001$, except between Quadrants 1 and 2 at $p < 0.05$), whereby participants rated Quadrant 1 (in-group) as the warmest, followed by Quadrant 2 (paternalistic), and then Quadrant 3 (contemptuous). These results also align with the SCM and supports H1. Overall, H1 was supported with the caveat of the lesbian, 35-year-old, and 40-year-old women being allocated to Quadrant 1.

Figure 3.1. Study 2 two-dimensional depiction of mean ratings for warmth and competence for different categories of women separated by median splits of the variables

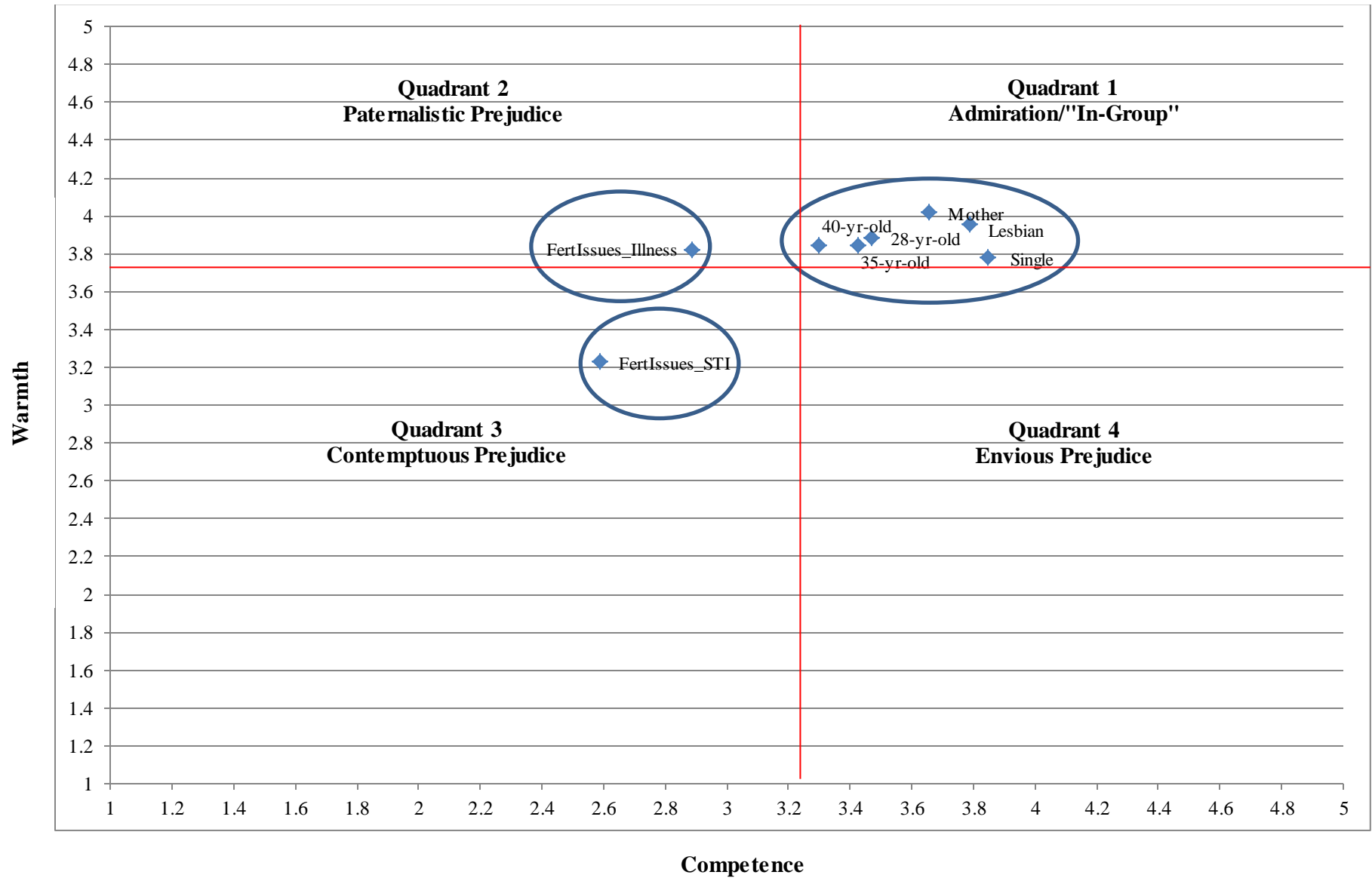


Table 3.8. Competence and warmth means and standard deviations for each quadrant

	Competence	Warmth
Overall sample	3.37 (0.65)	3.79 (0.63)
Quadrant 1 (in-group)	3.60 (0.67)	3.90 (0.62)
Quadrant 2 (paternalistic)	2.91 (0.88)	3.80 (0.80)
Quadrant 3 (contemptuous)	2.61 (0.91)	3.22 (0.93)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

3.6 Testing Hypothesis 2

Based on the SCM, I expected that each quadrant would be associated with differing levels of status and competition (H2). According to the SCM, status and competence should be positively correlated whereby status should be highest for the high competence quadrants (Quadrant 1 and 4), while competition and warmth should be negatively correlated whereby competition should be lowest for the high warmth quadrants (Quadrant 1 and 3). To test this hypothesis, first means for status and competition were calculated, then Pearson r correlations between status and competence and then competition and warmth were examined, and finally the status and competition means for each quadrant were compared with repeated measures ANOVAs.

3.6.1 Status and competition ratings of each quadrant. Sample and quadrant means for status and competition were calculated (Table 3.9). Next, Pearson r correlations were calculated between status and competence as well as competition and warmth. A positive correlation between status and competence emerged ($r = 0.64, p < 0.01$) while a negative correlation between warmth and competition emerged ($r = -0.29, p < 0.01$), which aligns with predictions based on the SCM.

Next, to confirm the distinction between quadrants based on status and warmth, repeated measures one-way ANOVAs were calculated for each quadrant with status and competition as dependent variables. Results suggested a main effect of group for status, $F(1.57, 280.26) = 197.71, p < .001, \eta^2 = 0.53$. The post hoc analyses indicated significant differences between the quadrants (all at $p < 0.001$), with the participants rating Quadrant 1 (in-group) as having the highest status, followed by Quadrant 2 (paternalistic group), and then Quadrant 3 (contemptuous group). With respect to competition, results suggested a main effect of group, $F(1.49, 281.92) = 9.67, p < .001, \eta^2 = 0.05$. The post hoc analyses indicated significant differences between the quadrants, with participants rating Quadrant 3 (contemptuous) as the greatest source of

competition, compared to Quadrant 1 (at $p < 0.05$) and Quadrant 2 (at $p < 0.05$). Overall, these results align with the SCM and support all aspects of H2.

Table 3.9. Status and competition means and standard deviations for each quadrant

	Status	Competition
Overall sample	3.60 (0.55)	2.03 (0.88)
Quadrant 1 (in-group)	3.78 (0.58)	2.02 (0.89)
Quadrant 2 (paternalistic)	3.43 (0.75)	1.92 (0.98)
Quadrant 3 (contemptuous)	2.60 (0.90)	2.19 (1.18)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

3.7 Testing Hypothesis 3

As outlined by the SCM, I expected that each quadrant would elicit distinct affective reactions (H3). More specifically, I expected that Quadrant 1 would elicit higher levels of admiration compared to the other quadrants, while Quadrant 2 would elicit higher levels of pity, and Quadrant 3 would elicit higher levels of contempt. Since none of the groups were allocated to Quadrant 4, I could not examine the SCM assumption that groups in this quadrant should elicit higher levels of envy. These hypotheses were tested by calculating the affective reaction means for each quadrant and then statistically comparing these means with repeated measures ANOVAs.

3.7.1 Measuring and comparing affective reactions for each quadrant. Affective reaction means (admiration, pity/sympathy, contempt, envy) were calculated for each quadrant (See Table 3.10). Following this, repeated measures one-way ANOVAs were calculated to compare the quadrants on each affective reaction. Results suggested a main effect of group for admiration, $F(1.89, 355.41) = 111.90, p < .001, \eta^2 = 0.37$. The post hoc analyses indicated significant differences between all the quadrants (each at $p < 0.001$), with the participants rating Quadrant 1 (in-group) as the most admired, followed by Quadrant 2 (paternalistic), and then Quadrant 3 (contemptuous). However, the quadrant means were all below the scale midpoint suggesting none of the groups were particularly admired. Results also suggested a main effect of group for pity/sympathy, $F(1.80, 339.24) = 73.61, p < .001, \eta^2 = 0.28$. The post hoc analyses indicated significant differences between all the quadrants (each at $p < 0.001$, with Quadrants 1 and 2 at $p = 0.01$), with the participants rating Quadrant 2 (paternalistic) as the most pitied, followed by Quadrant 3 (contemptuous), and then Quadrant 1 (in-group). Although, the quadrant

means for pity/sympathy hovered around the scale midpoint. There was also a main effect of group for contempt, $F(1.47, 269.22) = 29.16, p < .001, \eta^2 = 0.14$. The post hoc analyses indicated significant differences between almost all the quadrants (each at $p < 0.001$, with Quadrant 1 and 2 at $p = 0.001$, with the participants rating Quadrant 3 (contemptuous) as eliciting the most contempt, followed by Quadrant 2 (paternalistic), and Quadrant 1 (in-group). Again, the quadrant means were well below the scale midpoint suggesting participants did not hold strong contempt for any of the groups. With respect to envy, there were no significant differences between the groups and all the means were well below the scale midpoint. Overall, these results support H3 and align with the principles of the SCM.

Table 3.10. Affective reaction means and standard deviations for each quadrant

	Admiration	Pity/Sympathy	Contempt	Envy
Overall sample	2.48 (0.95)	2.63 (0.81)	1.40 (0.55)	1.15 (0.37)
Quadrant 1 (in-group)	2.66 (1.06)	2.47 (0.82)	1.29 (0.47)	1.15 (0.38)
Quadrant 2 (paternalistic)	2.29 (1.30)	3.39 (1.21)	1.43 (0.77)	1.13 (0.43)
Quadrant 3 (contemptuous)	1.48 (0.86)	2.69 (1.19)	1.77 (1.07)	1.13 (0.43)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

3.8 Testing Hypothesis 4

I expected that the women in Quadrant 1 would receive the highest ratings of all on the “good mother” scale (H1). This hypothesis was examined by first calculating the quadrant means for “good mother” and then running a repeated measures ANOVA to compare the quadrant means.

3.8.1 Measuring and comparing the “good mother” construct for each quadrant.

The mean ratings for the “good mother” construct for each quadrant were calculated (Table 3.11), then a repeated measures one-way ANOVA was calculated to compare the quadrant means. Results suggested a main effect of group for good mother ratings, $F(1.61, 292.57) = 97.09, p < .001, \eta^2 = 0.35$. The post hoc analyses indicated significant differences between all the quadrants (each at $p < 0.001$), with the participants rating Quadrant 1 (in-group) as the best mother, followed by Quadrant 2 (paternalistic), and then Quadrant 3 (contemptuous). For each quadrant, though, the good mother means were all above the scale midpoint, suggesting participants positively evaluated each groups’ mother capabilities.

Table 3.11. Good mother construct means and standard deviations for each quadrant

	Good mother
Overall sample	4.01 (0.64)
Quadrant 1 (in-group)	4.17 (0.65)
Quadrant 2 (paternalistic)	3.82 (0.83)
Quadrant 3 (contemptuous)	3.30 (1.00)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

3.9 Testing Hypothesis 5

As posited by the AAA model, I expected Quadrant 3 to be judged to have an internal locus of control and receive a higher rating of responsibility/blame compared to the other quadrants, while Quadrants 1 and 2 were expected to be judged as having an external locus of control for their fertility issues and receive lower ratings of responsibility/blame (H5). This hypothesis was examined by first calculating the quadrant means for responsibility/blame and then running a repeated measures ANOVA to compare the quadrants.

3.9.1 Measuring and comparing responsibility/blame for each quadrant. The mean ratings for responsibility/blame for each quadrant were calculated (Table 3.12), then a repeated measures one-way ANOVA was calculated to compare the quadrant means. Results suggested a main effect of group for responsibility/blame, $F(1.37, 252.41) = 277.79, p < .001, \eta^2 = 0.60$. The post hoc analyses indicated significant differences between all the quadrants (each at $p < 0.001$), with the participants rating Quadrant 3 (contemptuous) as the most responsible/to blame, followed by Quadrant 1 (in-group), and then Quadrant 2 (paternalistic). While the blame/responsibility mean for Quadrant 3 was just below the scale midpoint, suggesting not an overly strong judgement, this mean was well above that for Quadrants 1 and 2 who received very low ratings on this scale. Overall, these results supported H4 and the principles of the AAA model.

Table 3.12. Responsibility/blame means and standard deviations for each quadrant

	Responsibility/Blame
Overall sample	1.67 (0.53)
Quadrant 1 (in-group)	1.52 (0.56)
Quadrant 2 (paternalistic)	1.30 (0.57)
Quadrant 3 (contemptuous)	2.97 (1.25)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

3.10 Testing Hypothesis 6

Based on the AAA model, I expected to find a negative correlation between ratings of responsibility/blame and sympathy. Further, I expected to find a positive correlation between sympathy and the support/helping behaviour variables (H6). This hypothesis was examined employing Pearson r correlations between all of the variables.

3.10.1 Measuring the AAA model correlations. Pearson r correlations were calculated across the sample between responsibility/blame, pity/sympathy, and the support/helping behaviour variables (Table 3.13). In contrast to expectations based on the AAA model, there was no relationship between responsibility/blame and pity/sympathy. However, there was support for the expected significant relationships between the helping behaviour variables and both pity/sympathy and blame/responsibility.

Table 3.13. Correlations between blame/responsibility, sympathy, contempt, and support/helping behaviour variables for the sample

	Pity/Sympathy	Access treatment	Financial aid	Tax increase	Online funding
Responsibility/Blame	0.01	-0.26**	-0.24**	-0.21**	-0.12
Pity/Sympathy		0.18*	0.15*	0.21**	0.28**

** = correlation is significant at the 0.01 level (2-tailed).

* = correlation is significant at the 0.05 level (2-tailed).

3.11 Testing Hypothesis 7

As outlined by the AAA model, I expected that each quadrant would receive differential ratings of support/helping behaviour. Specifically, I expected that Quadrant 3 would receive lower ratings of support/helping behaviour compared to the other quadrants, while I expected Quadrants 1 and 2 to receive higher ratings of support/helping behaviour (H7). These hypotheses were examined by calculating the quadrant means for each support/helping behaviour variable and then examining the mean differences with repeated measures ANOVAs.

3.11.1 Measuring and comparing support/helping behaviour variables. The support/helping behaviour means were calculated for each quadrant (Table 3.14). After this, repeated measures one-way ANOVAs were calculated to compare the quadrants on each support/helping behaviour variable. Results suggested a main effect of group for “deserving of access to ART”, $F(1.65, 312.61) = 45.39, p < .001, \eta^2 = 0.19$. The post hoc analyses indicated a significant difference between Quadrants 1 and 3 and between Quadrant 2 and 3 (each at $p <$

0.001), but no significant difference between Quadrants 1 and 2, meaning Quadrants 1 and 2 were seen as more deserving than Quadrant 3. Results also suggested a main effect of group for “deserving of financial coverage for ART”, $F(1.60, 298.28) = 47.37, p < .001, \eta^2 = 0.20$. The post hoc analyses indicated a significant difference between Quadrants 1 and 3 and between Quadrant 2 and 3 (each at $p < 0.001$), but no significant difference between Quadrants 1 and 2, meaning Quadrants 1 and 2 were seen as more deserving than Quadrant 3. There was also a main effect of group for “support for a tax increase to cover ART”, $F(1.72, 323.90) = 49.10, p < .001, \eta^2 = 0.21$. The post hoc analyses indicated significant differences between all the quadrants (each at $p < 0.001$), with more support for Quadrant 2, followed by Quadrant 1, then Quadrant 3. Finally, results suggested a main effect of group for “willingness to donate money online”, $F(1.65, 316.46) = 64.80, p < .001, \eta^2 = 0.25$. The post hoc analyses indicated significant differences between all the quadrants (at $p < 0.001$ for each, apart from Quadrant 1 and 2 at $p = 0.001$), with more willingness to donate to Quadrants 2 and Quadrant 1, followed by Quadrant 3. Overall, these results supported my seventh hypothesis whereby participants were least willing to help Quadrant 3 compared to the other two quadrants.

Table 3.14. Helping behaviour/support means and standard deviations for each quadrant

	Deserve ART access	Deserve financial coverage	Support tax increase	Support online funding
Quadrant 1 (in-group)	4.11 (0.70)	3.80 (0.83)	3.17 (1.01)	2.95 (0.88)
Quadrant 2 (paternalistic)	3.99 (1.00)	3.81 (1.02)	3.20 (1.13)	3.13 (1.09)
Quadrant 3 (contemptuous)	3.42 (1.16)	3.18 (1.20)	2.61 (1.18)	2.40 (0.99)

Note. Three 5-point response scales were used (1 = *strongly disagree* to 5 = *strongly agree*; 1 = *very undeserving* to 5 = *very deserving*; and, 1 = *very unwilling* to 5 = *very willing*).

3.12 Study 2 Discussion

For Study 2, the primary purpose was to examine the social stereotypes and associated social sanctioning for involuntarily childless women who might consider using ART using the frameworks of the SCM and Weiner’s AAA model of helping behaviour. Similarly, to Study 1, the woman with an untreated STI was allocated to Quadrant 3, the woman with the serious illness was allocated to Quadrant 2, and Quadrant 1 consisted of all of the other women. None of the women were allocated to Quadrant 4 (envious), meaning none of the women were ambiguously stereotyped as high in competence, but low in warmth. This suggests that

participants did not view any of the involuntarily childless women as groups as worthy of envy, successful/doing well for themselves, or as sources of competition (Fiske et al., 2002), which aligns with research on the negative public opinions of involuntarily childless groups (e.g., Settle & Brumley, 2014; Koropecj-Cox et al., 2015; Koropecj-Cox et al., 2018).

The stigma of illness and disease has been strongly supported in the literature (e.g., Sartorius, 2007; Petit, 2008; Knapp et al., 2014; Weiss, Stephenson, Edwards, Rigney, & Copeland, 2014; Dong-Ling Wang, Zhan, Zhang, & Xia, 2015), particularly when an illness is perceived to be caused by personal behaviours or lifestyles (Chapple et al., 2004; Hegarty & Golden, 2008; Lebel & Devins, 2008; Marlow, Waller, & Wardle, 2010; Shepherd & Gerend, 2013). Similar to Study 1, the allocation of the woman with an untreated STI to Quadrant 3 (contemptuous) aligns with research which has shown that individuals with STIs, in particular, often receive negative evaluations and are stigmatized for their presumed “promiscuous behaviour” (Campbell et al., 2007; Young et al., 2007; Nack, 2008; Foster & Byers, 2013). Depending on what was imagined or the overall level of knowledge of STIs, participants may also have been concerned about the woman transmitting the infection to her child. For example, if a mother has a herpes outbreak in the birth canal a newborn can contract the virus or become blinded if their eyes encounter an open sore during childbirth (Money, Steben, & Infectious Disease Committee, 2008).

Results of the current study also showed that participants were least willing to support/help the woman with an STI. Research on prosocial behaviour, or altruism, suggests there are a variety of factors which can impact the likelihood of helping another person, including personality factors (e.g., socialization, friendliness; Jeffries, 1998), age (e.g., younger more likely to help than older people; Gummerum, Hanoch, Parsons, & Hummel, 2010; Takagishi, Kameshima, Schug, Koizumi, & Yamagishi, 2010; Paulus, Gillis, & Moore, 2013; Paulus and Moore, 2014; Ongley, Nola, & Malti, 2014; Takagishi, Koizumi, Fujii, Schug, Kameshima, & Yagamishi, 2014), social status (i.e., more likely to help higher vs. lower status people; Goodman & Gareis, 1993), gender (Baskerville et al 2000; Andreoni & Vesterlund, 2001), religiosity (i.e., more religious, more helpful; Bekkers and Wiepking 2011; Musick and Wilson 2008; Putnam 2000; Wiepking, Bekkers, and Osili 2014; Wuthnow 1991, 2004), and personally knowing the individual (Amato, 1990; Burnstein, Crandall, & Kitayama, 1994; Neyer & Lang, 2003; Einolf, 2008). Some researchers have distinguished between sympathetic and

moral altruism, the former which elicits affection and sympathy towards people we know and the latter which relates to sentiments like compassion and pity towards strangers (Tomini, 2010), suggesting that knowing a person may impact willingness to offer aid. The relationship between helping behaviour and personally knowing someone is mixed, though: a variety of studies have shown that likelihood of helping increases with relational closeness (e.g., Burnstein et al., 1994; Neyer & Lang, 2003), yet there are also many instances of altruistic behaviour among unrelated individuals and strangers (Bereczkei et al, 2010) with several theories posited to explain this, including indirect reciprocity (Alexander, 1987; Milinski, Semmann, Bakker, & Krambeck, 2001), strong reciprocity (Fehr, Fischbacher, & Gächter, 2002; Bowles & Gintis, 2004), reputation-building (Milinski, Semmann, & Krambeck, 2000; Semmann, Krambeck, & Milinski, 2005; Bereczkei, Birkas, & Kerekes, 2007), competitive altruism (Barclay, 2004; Hardy & Vugt, 2006), and altruistic punishment (Boyd, Gintis, Bowles, & Richerson, 2003; Bernhard, Fischbacher, & Fehr, 2006). Belief that an illness is caused by personal behaviours or lifestyles, as with people who contract an STI (e.g., Smith & Nave, 2007), is also associated with less helping behaviour (Weiner et al., 1988) and less likelihood of prioritizing funding for research related to that illness (Knapp-Oliver & Moyer, 2012).

The elicitation of pity/sympathy is also said to trigger helping or altruistic behaviour (Weiner et al., 1988; Weiner, 1993, 1995, 1996), so higher pity/sympathy elicited by Quadrants 1 and 2 compared to Quadrant 3 aligned with this evidence. However, the means for pity/sympathy hovered around the scale midpoint suggesting participants did not rate the groups particularly high on any of these affective reactions. Pity has been defined as “a condescending, or contemptuous form of feeling sorry for someone” that is “often directed at people who are perceived as pathetic or having brought about their own misery” (Geller, 2006), while sympathy has been distinguished as an “expression of concern or sorrow about distressful events in a person’s life (Clark, 2010). In their seminal publication on the SCM, Fiske and colleagues (2002) described pity and sympathy as “downward assimilative emotions” that are “directed toward people with negative outcomes who cannot control the cause” having borrowed from interpersonal theories developed by Richard Smith (2000) and Weiner and colleagues (1982, 1985, 1988). Considering these definitions and the modest pity ratings, participants may have perceived somewhat of a lack of responsibility on the part of the women for their fertility status. Indeed, the means for responsibility/blame were all below the scale midpoint suggesting

participants did not consider any of the groups responsible or to blame for their fertility issues. The controllability and responsibility elements of contracting STIs seem to play a role in the stigma of these conditions. For example, individuals who acquire an STI as a result of engaging in voluntary unprotected sex are blamed more (Smith & Nave, 2007) than individuals who contract an STI after the condom broke (Hafer, 2000; Hafer et al., 2005). However, the low ratings of blame/responsibility provided overall by participants could be due to beliefs regarding infertility. Participants may have believed that infertility is largely related to biological inevitabilities that are out of one's control. In line with this, across varying groups fertility knowledge and awareness of infertility risk factors (e.g., increased maternal age) are quite low (Williamson, Lawson, Downe, & Pierson, 2014; Rouchou & Forde, 2015; Garcia, Vassena, Prat, & Vernaev, 2016; Maeda et al., 2016; Walker, Blumfield, & Truby, 2018). A recent systematic review examining research on fertility awareness found that less than half of each of the study participants knew the medical definition of infertility, while there were mixed results regarding knowledge about infertility causes and risk factors (Pedro, Brandao, Schmidt, Costa, & Martins, 2018).

Individuals with an illness or disability can also receive more ambivalent evaluations where they are perceived as low-status and incompetent, while also viewed as warm (Fiske et al., 2002; Cuddy et al., 2007; Louvet et al., 2009; Louvet & Rohmer, 2010). The allocation of the woman with an unspecified illness to Quadrant 2 (paternalistic) suggests that participants may have assumed her situation was due to uncontrollable forces. This aligns with previous research which has shown that when an illness or disease is understood to be uncontrollable the target will elicit pity/sympathy, even if the condition is one like HIV/AIDS (Graham, Weiner, Giuliano, & Williams, 1993; Steins & Weiner, 1999; Cobb & De Chabert, 2002), mental illness (Corrigan et al., 2001), or obesity (DeJong, 1980), all of which are notoriously stigmatized (e.g., Sartorius, 2007; Sengupta, Banks, Jonas, Miles, & Smith, 2011; Stuenkel & Wong, 2012). In spite of the motherhood intentions possessed by the women with an STI and an illness, they were lacking in competence and/or warmth to be allocated to Quadrant 1 (in-group, admired).

The allocation of each of the women to Quadrant 1 could potentially be explained through consideration of the characteristics of the women described or the sample itself. For example, strong assumptions around womanhood and motherhood (Fisher & Hammarberg, 2012; McInturff & MacDonald, 2015) may explain why participants evaluated these mothers or

intended mothers positively. Indeed, parents receive much more positive evaluations compared to childless individuals (Kopper & Smith, 2001; Koropecj-Cox et al., 2015). However, motherhood intentions alone cannot fully explain the quadrant allocation of these women otherwise I would expect all of the groups to be in Quadrant 1. Alternatively, participants may have considered these women to be part of their “in-group” because they personally resonated with them. The sample was comprised primarily of Canadian-born, 22-year-old, Liberal Party-affiliated, single, childless, undergraduate females who intend on having children in the future with medical fertility treatment assistance if required. It is possible that participants empathized with the differential categories of women because they imagined themselves delaying childbearing in pursuit of education, career, financial stability, or an ideal romantic partner/co-parent. The pursuits of these goals are often primary reasons for individuals to postpone childbearing (Waldenstrom, 2016; Berrington, 2017; Jalovaara & Fasang, 2017), particularly among female university students (Neyer, Lappegard, & Vignoli, 2013; Matthews & Hamilton, 2014). Further, with the increasing norm of delayed childbearing (Matthews & Hamilton, 2014; Koert & Daniluk, 2017) many participants may have friends or family who have made this decision. With respect to lesbian women, in previous studies they have been allocated to Quadrant 4 (envious) (Fiske et al., 2002). For the current results though, participants may have either positively evaluated this woman to appear politically correct and non-prejudiced (Morrisson, Morrisson, & Franklin, 2009), or truly respected her. Not only do undergraduate students tend to hold more liberal attitudes (Hanson, Weeden, Pascarella, & Blach, 2012), but female undergraduate students are also more likely to support LGB rights (Holland, Matthews, & Schott, 2013) and this community’s pursuit of parenthood (Schoephoerster & Aamlid, 2016).

With respect to SCM affective reactions, the means for contempt and envy were well below the scale midpoints. For this study, the underlying concepts for contempt included anger and resentment. Although widely debated, anger has been defined as “a syndrome of relatively specific feelings, cognitions, and physiological reactions linked associatively with an urge to injure some target” (Berkowitz & Harmon-Jones, 2004). Based on the theoretical frameworks developed by Berkowitz (1990) and Averill (1983), Gilam and Hendler (2015) outlined three antecedents and instigators of anger: 1) real or imagined threat (e.g., physical or psychological pain); 2) frustration that arises when a goal has been obstructed; and 3) feeling personally offended as a result of unfair treatment, violation of social norms, insults, rejections, or

criticisms. The first and third proposed causes of anger highlight the importance of interpersonal social interactions when considering this emotion (Gilam & Hendler, 2015). Fiske and colleagues (2002) also noted that anger is reserved for individuals faced with avoidable negative outcomes. Relatedly, resentment has been described as a “moral attitude” which can arise when the expectation that someone will receive goodwill from a person is violated (Rosas, 2016). Not having a close, personal relationship with or experiencing any wrong-doing from the different women could explain the lack of contempt (anger/resentment) elicited by the quadrants.

With respect to the low elicitation of envy (i.e., envy, jealous) across the quadrants, jealousy has been defined largely in the context of relationships as “a protective reaction to a perceived threat to a valued relationship or to its quality” and is most likely to arise in situations where the “attributes or behaviours of others threaten the individual’s own self-definition” (Clanton, 2006). In contrast, envy is considered as “hostility toward superiors” or “a negative feeling toward someone who is better off” or “resentment toward someone who has a desirable object or quality” (Clanton, 2006). Similarly, Fiske and colleagues (2002) describe envy as an emotion which arises when an out-group is perceived as socioeconomically successful and posing a competitive threat. By these definitions, participants may not have been envious of the women because they posed no threat to a valued relationship and were not seen as superior, better off socioeconomically, or possessing something desirable.

For the most part, my hypotheses were supported and provided insight regarding the utility of the SCM and AAA model for examining stereotyping of involuntarily childless women. These results also highlight the varying degree of stereotyping associated with the different groups of women based on their social status. While the woman with an untreated STI consistently received the most negative evaluations, there was also some positive assumptions made about her by participants, including the fact that she was considered to be a good mother and received some support (albeit, the least) in her efforts to access fertility treatments. Further, these results provided contrary evidence to the notion that involuntarily childless women are negatively evaluated. Overall, participants viewed many of the women quite positively.

This current study was instrumental in narrowing the focus of this dissertation to stereotypes associated with involuntarily childless women. It was also important for testing the utility of the AAA model in examining helping behaviour directed towards women who intend to access ART to overcome fertility struggles. Despite these strengths, this study was limited in that

it relied heavily on correlations among variables rather than direct manipulation of relevant variables. For the next study, an experimental design was employed to determine whether the social context and fertility status of the women resulted in more positive or negative stereotypes. Further, to allow for a more manageable experimental design, four involuntarily childless women each representing one of the four SCM quadrants was identified.

CHAPTER 4. STUDY 3

4.1 Study 3 Purpose

The next step for the overall project was to build upon and expand the first two studies by employing a between-group design to examine the potential affective and behavioural outcomes associated with different stereotypes of involuntarily childless women. A between-group experimental design reduces variability and improves the overall internal validity of the results (Mitchell & Jolley, 2012). For the current study, this design is required to demonstrate that a change in the independent variable (e.g., reason for fertility issues) has produced a change in the dependent variables (SCM and AAA model variables) and so will provide better evidence that differing attributions for reproductive challenges give rise to differing perceptions, affective reactions, and actions directed towards women (Mitchell & Jolley, 2012). Further, a true experimental between groups design randomly assigns participants to each condition (Mitchell & Jolley, 2012). The procedure of randomly assigning individuals to groups ensures that the two groups are equal on individual differences, or potential confounds (Mitchell & Jolley, 2012). To allow for between-group comparisons, each participant was randomly presented with only one of four brief vignettes (elaborated below), each of which described an involuntarily childless woman that represented one of the four SCM quadrants (in-group/admiration, paternalistic, contemptuous, and envious) and who were differentiated by the reason for their fertility struggles and need for ART (e.g., age-related decline in fertility due to advanced maternal age/delayed childbearing, illness-induced fertility problems, reproductive organ scarring due to infection, need for a surrogate to prioritize career-development). Participants rated the women in terms of warmth and competence to determine which stereotype outlined in the SCM characterized each group (i.e., paternalistic, admiration, contemptuous, envious), the affective reactions elicited by each woman (pity/sympathy, contempt, envy, and admiration) (Fiske et al., 2002), and subsequent behavioural consequences/social censure variables (Schmidt & Weiner, 1988; Weiner, 1980).

4.2 Study 3 Hypotheses

The specific hypotheses for this study were as follows:

Hypothesis 1 (H1): The reproductively challenged women will vary in terms of rated competence and warmth and fall into differential SCM quadrants. Specifically, it was expected that each of

the groups would fall into the following SCM quadrants based on the results of Studies 1 and 2 and past research (Fiske et al., 2002):

H1a: The 40-year-old woman who delayed childbearing will be allocated to the “Admired Quadrant” (Quadrant 1).

H1b: The woman experiencing fertility problems due to cancer will be allocated to the “Paternalistic Quadrant” (Quadrant 2).

H1c: The woman experiencing fertility problems due to untreated chlamydia will be allocated to the “Contemptuous Quadrant” (Quadrant 3).

H1d: The career-oriented woman considering surrogacy will be allocated to the “Envious Quadrant” (Quadrant 4).

Hypothesis 2 (H2): Based on the SCM, each quadrant was expected to elicit distinct affective reactions.

H2a: Quadrant 1 will elicit higher ratings of admiration compared to the other quadrants.

H2b: Quadrant 2 will elicit higher ratings of pity/sympathy compared to the other quadrants.

H2c: Quadrant 3 will elicit higher ratings of contempt compared to the other quadrants.

H2d: Quadrant 4 will elicit higher ratings of envy compared to the other quadrants.

Hypothesis 3: Based on past research on women and motherhood (Delhi, 1996; Hays, 1996; Ruddick, 2001; O’Reilly, 2004), it was expected that Quadrant 1 would be rated highest of all on the “good mother” scale.

Hypothesis 4 (H4): As outlined by Weiner’s AAA model, it was expected that the quadrants would receive differential ratings of responsibility/blame for their fertility issues depending on the perceived locus of control for their plight.

H4a: Quadrants 3 and 4 will receive higher ratings of responsibility/blame compared to the other quadrants.

H4b: Quadrants 1 and 2 will receive lower ratings of responsibility/blame compared to the other quadrants.

Hypothesis 5 (H5): As outlined by Weiner’s AAA model, I expected ratings of responsibility/blame to be negatively correlated with ratings of pity/sympathy. I also expected ratings of both blame/responsibility and pity/sympathy to be positively correlated with support/helping behaviour.

Hypothesis H6 (H6): Based on the AAA model, I predicted that the quadrants would receive differential ratings of support/helping behaviour.

H6a: Quadrants 3 and 4 will receive lower ratings of support/helping behaviour compared to the other quadrants.

H6b: Quadrants 1 and 2 will receive higher ratings of support/helping behaviour compared to the other quadrants.

4.3 Study 3 Participants and Procedure

The current study was approved by the University of Saskatchewan Research Ethics Board (Beh #17-345). One hundred and eighty-three undergraduate students [36 males (19.8%), 145 females (79.7%), 1 “did not disclose” (0.5%)] from the University of Saskatchewan with a mean age of 20.84 years ($SD = 3.99$; range = 17 to 38), participated in Study 3. Much of the sample reported being born in Canada (78.0%), identifying as Canadian (90.2%), and having a White, Caucasian, or European ethnicity/race (66.7%). Most of the sample identified either with the Liberal (40.4%) or Conservative (32.0%) parties of Canada. About three quarters of the sample identified as either being single (47.3%) or in a committed relationship (35.7%), and 164 (89.6%) identified as straight/heterosexual. Most of the sample indicated that they currently did not have children (94.5%), but many intended on having children in the future (79.7%). Please refer to Tables 4.1 and 4.2 for a full break down of the participant demographics.

Most of the sample indicated that they were either *likely* (34.4%) or *extremely likely* (31.2%) to access medical fertility treatments if personally faced with conception difficulties, and the majority of individuals underestimated the costs of fertility treatments (Table 4.3). Further, most participants were unwilling to spend more than \$5999 on fertility treatments.

Table 4.1. Study 3 Participant demographics

Ethnicity (N = 181)	Frequency
White or European	121 (66.9%)
Filipino	9 (5.0%)
South East Asian	9 (5.0%)
First Nations or Metis	9 (5.0%)
Black	7 (3.9%)
Other (Arab, Afghani, Chinese, Inuit, Latino/Hispanic, Middle East, South Asian, West Asian, or Multiracial)	26 (14.4%)

Note. The sample sizes alter due to non-responses.

Table 4.2. Study 3 participant demographics (continued)

Political Party (N = 179)	Frequency
Liberal Party of Canada	72 (40.2%)
Conservative Party of Canada	57 (31.8%)
New Democratic Party (NDP)	34 (19.0%)
Other (e.g., Green Party of Canada, None)	13 (7.3%)
Religious affiliation (N = 182)	
Roman Catholic	45 (24.7%)
Agnostic (uncertain)	45 (24.6%)
Atheism (not religious)	32 (17.5%)
Islam (Muslim)	13 (7.1%)
Other [e.g., Ukrainian Catholic, Anglican (Church of England, Episcopalian), Baptist, Lutheran, Presbyterian, Mennonite, Greek Orthodox, Sunni, Buddhist, Hindu, Sikh, Traditional Native & Apostolic, Christian, Mormon, OCA Orthodox Church of America, Church of Jesus Christ of Latter-Day Saints, Pentecostal, United Church]	45 (24.7%)
Relationship status (N = 183)	Frequency
Single (not in a committed relationship)	86 (47.3%)
Committed relationship	65 (35.7%)
Dating casually	13 (7.1%)
Other (Married, common-law spouse, living together, separated, widowed)	18 (9.8%)

Note. The sample sizes alter due to non-responses.

Table 4.3. Participants' responses regarding intentions for personal access and beliefs regarding the cost of fertility treatments

Likelihood of accessing medical fertility treatments (N = 154)	Frequency
Extremely likely	48 (31.2%)
Likely	53 (34.4%)
Neither likely not unlikely	34 (22.1%)
Unlikely	14 (9.1%)
Not at all likely	5 (3.2%)
Perceived estimated cost of fertility treatments (N = 183)	Frequency
Under \$1000 CDN	1 (0.5%)
\$1000 to \$1999 CDN	5 (2.7%)
\$2000 to \$3999 CDN	20 (10.9%)
\$4000 to \$5999 CDN	37 (20.2%)
\$6000 to \$7999 CDN	22 (12.0%)
\$8000 to \$10,000 CDN	48 (26.2%)
More than \$10,000 CDN	50 (27.3%)
Amount participants are willing to spend on fertility treatments (N = 183)	Frequency
Under \$1000 CDN	39 (21.3%)
\$1000 to \$1999 CDN	21 (11.5%)
\$2000 to \$3999 CDN	24 (13.1%)
\$4000 to \$5999 CDN	37 (20.2%)
\$6000 to \$7999 CDN	18 (9.8%)
\$8000 to \$10,000 CDN	19 (10.4%)
More than \$10,000 CDN	25 (13.7%)

Note. The sample sizes alter due to non-responses.

Participants were recruited via advertisements (Appendix I) posted on the University of Saskatchewan Psychology Participant Pool and compensated with credits towards their final psychology course grade. Participants signed up to complete the study through the Participant Pool website (<http://usask.sona-systems.com>) which then directed them to the online questionnaire hosted on Fluid Surveys (Appendix J). Participants recruited through the Psychology Participant Pool received partial credit towards their Introductory Psychology course grade. After reading and signing the consent form (Appendix K), participants were randomly assigned one of four vignettes and then completed the questionnaire assessing the components of the SCM and Weiner's AAA model, including warmth, competence, affective reactions, and behavioural consequences/social censure variables. The questionnaire took between 20-30 minutes to complete. At the end of the questionnaire, participants were given a debriefing form (Appendix L) which further explained the rationale for this line of research. Due to the moderate scale reliability scores in Studies 1 and 2 for some of the SCM variables (e.g., competence), a full version of the SCM questionnaire was employed in the current study (Fiske et al., 2002). This expanded questionnaire served to improve the reliability of some composites by increasing the number of underlying items targeting each theoretical construct. Using multiple, homogenous indicators is recommended over two-item scales because it enhances the construct validity (Emons, Sijtsma, & Meijer, 2007; Eisinga, te Grotenhuis, & Pelzer, 2012). For example, in the brief SCM questionnaire, confidence and competence were the underlying variables for the competence composite, but in the expanded questionnaire the composite was composed of the following variables: competence, confidence, capability, efficiency, intelligence, and skillfulness (Fiske et al., 2002). As with Study 2, the current study measured personal beliefs which has shown to be more positive (Heider et al., 2013) and more accurate in predicting overall attitudes and behaviours compared to eliciting social stereotypes (Kunda, 1999).

4.4 Study 3 Materials

4.4.1 Online questionnaire and vignettes. Each vignette described a woman named "Kate" who required access to medical fertility treatments due to a medical condition or lifestyle choice. The vignettes were identical, varying only on the independent variable which was reason for fertility issues/need for access to ART. Vignettes are useful for eliciting participant beliefs or attitudes and offer a variety of advantages which can increase study internal validity, construct validity, and reliability (Steiner, Atzmuller, & Su, 2016). First, vignettes provide concrete,

realistic contexts rather than hypothetical abstract contexts for participants to consider when responding to corresponding questions. Second, vignettes offer flexibility as they can be used in a variety of formats and for different purposes. This flexibility can aid in avoiding socially desirable or politically correct responses. Finally, respondents reportedly welcome vignettes as a “relief from monotonous questionnaires” (Steiner et al., 2016). The vignettes used in the current study were modelled after the one used by Cuddy, Fiske, and Glick (2004) and were developed using the recommendations for vignette design and construction in social research outlined by Hughes and Huby (2004) as well as Aguinis and Bradley (2014). Vignette construction was also guided by the need to manipulate perceived responsibility/blame for fertility issues/need to access ART (i.e., locus of control). Pilot testing of the vignettes was undertaken to ensure they met the needs of the study. The vignettes are as follows:

Chlamydia (N = 50; 27.3%)

Kate is a 29-year-old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. After unsuccessfully trying to become pregnant for two years, Kate consults with her physician. Her physician informs her that it will be very difficult for her to become pregnant naturally because of the damage resulting from a sexually transmitted infection (chlamydia) that she had as a young adult. Kate and Daniel both want children of their own, and they decide to pursue fertility treatments. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in Kate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

Cancer (N = 43; 23.5%)

Kate is a 29-year-old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. After unsuccessfully trying to become pregnant for two years, Kate consults with her physician. Her physician informs her that it will be very difficult for her to become pregnant naturally because of the damage resulting from chemotherapy and radiation treatment for cancer that she had as a young adult. Kate and Daniel both want children of their own, and they decide to pursue fertility treatments. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in Kate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

Delayed childbearing/advanced maternal age (N = 47; 25.7%)

Kate is a 40-year-old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. After unsuccessfully trying to become pregnant for two years, Kate consults with her physician. Her physician informs her that it will be very difficult for her to become pregnant naturally because of her age. Kate and Daniel both want children of their own, and they decide to pursue fertility treatments. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in Kate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

Career-focused/surrogacy (N = 43; 23.5%)

Kate is a 29-year-old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. However, Kate is worried that the physical aspects of being pregnant will interfere with her performance at work and jeopardize her chances for promotion. Kate and Daniel both want children of their own, and so they decide to pursue surrogacy, in which another woman carries the pregnancy and gives birth to their baby for them. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in the surrogate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

4.4.2 Manipulation check. To determine whether participants carefully read the vignettes, they were asked to answer questions regarding details about “Kate’s” life. Specifically, they were asked her age, whether she works outside of the home, the name of her husband, and the length of time she has been married. Within this set of questions was a manipulation check item, which asked participants to select one of four options about the reason “Kate” was pursuing in vitro fertilization (IVF). A total of 17 participants incorrectly answered this question relating to the vignette they read and were subsequently removed from analyses.

4.4.3 Stereotype Content Model items: Attributions and affective reactions.

Participants were asked to consider the woman they read about in the vignette and to personally rate her on several variables. Specifically, using a 5-point scale (1 = *not at all* to 5 = *extremely*), participants rated the woman in terms of how confident, competent, capable, efficient, intelligent, skillful, sincere, warm, well-intentioned, trustworthy, good-natured, and friendly they perceived her to be. A composite/mean score was created for both competence (confident + competent + capable + efficient + intelligent + skillful /6) and warmth (sincere + warm + well-

intentioned + trustworthy + good-natured + friendly /6). Cronbach's alpha for the competence composite was $\alpha = .80$ and $\alpha = .91$ for warmth, which are both considered acceptable (Nunnally & Bernstein, 1994; Bland & Altman, 1997; DeVillis, 2003).

In addition to examining the stereotypes associated with each vignette the participants were also asked to rate the affective reactions the vignette elicited. Using a scale of 1 (*not at all*) to 5 (*extremely*), participants rated the extent to which they believed the woman they read about made them personally feel proud, inspired, fond, admiring, respectful, angry, resentful, disgusted, frustrated, hateful, uneasy, envious, jealous, tense, anxious, pity, sympathy, and compassionate. Composites/mean scores were created for admiration (proud + inspired + fond + admiring + respectful/5), contempt (angry + resentful + disgusted + frustrated + hateful + uneasy/6), envy (envious + jealous + tense + anxious/4), and pity/sympathy (pity + sympathy + compassionate/3). The Cronbach's alpha values for each composite variable are as follows: $\alpha = .91$ for admiration, $\alpha = .93$ for contempt, $\alpha = .78$ for envy, and $\alpha = .69$ for pity/sympathy, all within the acceptable range (Nunnally & Bernstein, 1994; Bland & Altman, 1997; DeVillis, 2003).

4.4.4 Additional attributions: Perceived mothering competence and responsibility for fertility issues. To examine perceptions related to whether each woman would be a "good mother", participants were asked to rate using a five-point scale (1 = *not at all* to 5 = *extremely*) to what extent they believed the woman they read about was a: competent mother; nurturing mother; capable mother; hard-working mother; and, loving mother. The mean ratings for each of these variables were then averaged together to create the "good mother" construct. Perceptions of level of responsibility for the fertility problems each woman was described as experiencing were also assessed. To examine this, participants were asked using a five-point scale (1 = *not at all* to 5 = *extremely*) to what extent they perceived the woman they read about as: responsible for her fertility problems; to blame for her fertility problems; at fault for her fertility problems; and, personally accountable for her fertility problems. The mean ratings for each variable were then averaged together to create the "responsible for fertility issues" construct. Cronbach's alpha for the "good mother" construct was $\alpha = .91$ and $\alpha = .94$ for the "responsible for fertility issues" construct, both within the acceptable range (Nunnally & Bernstein, 1994; Bland & Altman, 1997; DeVillis, 2003).

4.4.5 Helping behaviour/support variables. Exploration of the level of support for each woman's general access to medical fertility treatment was done using a five-point scale (1 = *strongly disagree* to 5 = *strongly agree*) participants were asked whether they personally agreed that the women should have access to fertility treatments (e.g., in vitro fertilization, donor insemination, hormonal therapy, etc.). Participants were also asked using a five-point scale (1 = *very undeserving* to 5 = *very deserving*) how deserving they believed the women were of receiving fertility treatments if they were covered under Canada's universal healthcare net. To examine the degree of financial support participants would personally provide to the woman they read about in the vignette, they were asked two questions. First, participants were asked using a five-point scale (1 = *very unsupportive* to 5 = *very supportive*) how supportive they would be of an increase in their yearly taxes to ensure that the cost of fertility treatments for the women could be covered under Canada's universal health care net. The second question asked participants to indicate using a five-point scale (1 = *very unwilling* to 5 = *very willing*) how willing they would be to donate money to a woman personally raising money through online means (e.g., Go Fund Me) for medical fertility treatments. Participants were also asked how much money they would be willing to donate to a woman in her attempts to raise money online for fertility treatments.

4.5 Study 3 Results

4.5.1 Testing hypothesis 1. As with Study 1 and 2, I initially had to determine whether the involuntarily childless women varied on participant ratings of competence and warmth. I expected that: Quadrant 1 (admiration) would consist of the 40-year-old woman; Quadrant 2 (paternalistic) would include the woman experiencing fertility problems due to cancer; Quadrant 3 (contemptuous) would include the woman experiencing fertility problems due to an untreated chlamydia infection; and, Quadrant 4 (envious) would include the career-oriented woman considering surrogacy (H1).

4.5.2 Calculating means for competence and warmth. Competence and warmth ratings for each woman were averaged across participants (Table 4.4). All the means exceeded the scale midpoint, meaning that on average participants rated the women moderately on both competence and warmth and each group was allocated to Quadrant 1.

Table 4.4. Competence and warmth means for each woman and quadrant

Group	Competence	Warmth
29-year-old chlamydia ($n = 49$)	3.70 (0.60)	4.26 (0.44)
29-year-old cancer ($n = 42$)	3.83 (0.44)	4.22 (0.62)
40-year-old delayed childbearing ($n = 47$)	3.87 (0.66)	4.28 (0.65)
29-year-old career driven ($n = 42$)	3.71 (0.76)	3.48 (0.96)
Quadrant 1 ($n = 89$)	3.85 (0.57)	4.25 (0.63)
Quadrant 2 ($n = 49$)	3.70 (0.60)	4.25 (0.43)
Quadrant 3 ($n = 42$)	3.73 (0.76)	3.46 (0.97)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

4.5.3 Creating groupings via median split. After calculating the means, the median split for competence and warmth for the sample were calculated. This step was taken because based on the competence and warmth means for each woman and the scale midpoints, each group was allocated to Quadrant 1. The median value for competence was 3.83 the median value for warmth was 4.00. As with Study 1 and 2, these median values were then used to create the quadrant boundaries. With the sample medians and group means for competence and warmth, the groups of women were arrayed on a two-dimensional Competence X Warmth space (Figure 4.1). Groups who were above the competence and warmth median based on the mean ratings of competence and warmth they received were allocated to Quadrant 1 (admiration, in-group), which included the woman with cancer and 40-year-old woman who delayed childbearing. Groups who were below the median for competence and above the median for warmth based on the mean ratings of competence and warmth they received were allocated to Quadrant 2 (paternalistic), which included the woman with chlamydia. Finally, groups who were below the medians for both competence and warmth based on the mean ratings of competence and warmth they received were allocated to Quadrant 3 (contemptuous), which included the career-focused woman considering surrogacy. No groups were allocated to Quadrant 4 (envious). My hypotheses were partially supported as only one prediction was realized with the 40-year-old being allocated to Quadrant 1. The allocation of the other women turned out contrary to my expectations.

4.5.4 Confirming separation of the groups based on mean ratings of competence and warmth. To statistically confirm separation of the women into the quadrants, one-way ANOVAs with competence and warmth as the dependent variables were calculated. Results suggested no statistically significant difference between quadrants for competence, $F(2, 174) = 1.22, p = ns$.

Based on the SCM, I would have expected differences on ratings of competence between the quadrants. With respect to warmth, results suggested a main effect of quadrant, $F(2, 174) = 20.86, p < .001, \eta^2 = 0.01$. According to Cohen (1988), an eta squared effect size value of 0.01 is small, 0.059 is medium, and 0.138 is large. The post hoc analyses indicated no significant difference between Quadrant 1 and Quadrant 2. However, Quadrant 3 significantly differed from Quadrants 1 and 2 (at $p < 0.001$). These results align with what would be expected based on the SCM.

4.6 Testing Hypothesis 2

As with Studies 1 and 2, I expected that each quadrant would elicit distinct affective reactions as outlined by the SCM (i.e., Quadrant 1 should elicit the most admiration, Quadrant 2 the most pity/sympathy, Quadrant 3 the most contempt, and Quadrant 4 the most envy). To test this assumption, the affective means for each quadrant were calculated and then statistical comparisons between the means were analyzed with one-way ANOVAs. The affective reaction means for each quadrant are denoted in Table 4.5. There were no significant differences between the quadrants with respect to envy, $F(2, 176) = 0.99, p = ns$. However, results suggested quadrant differences for admiration, $F(2, 176) = 10.70, p < .001, \eta^2 = 0.01$. Post hoc analyses indicated that Quadrant 3 elicited significantly less admiration (below the scale midpoint) compared to Quadrant 1 (at $p < 0.001$) and Quadrant 2 (at $p < 0.05$), who did not significantly differ from each other.

Results also suggested quadrant differences for contempt, $F(2, 173) = 11.98, p < .001, \eta^2 = 0.03$. The post hoc analyses indicated that Quadrant 3 elicited significantly more contempt than the other Quadrants (both at $p = 0.001$) who did not significantly differ from each other. However, none of the means for contempt were above the scale midpoint suggesting none of the quadrants elicited high levels of this affective reaction. Finally, results suggested quadrant differences for pity/sympathy, $F(2, 173) = 29.32, p < .001, \eta^2 = 0.02$. The post hoc analyses indicated that Quadrant 3 elicited significantly less pity/sympathy (below the scale midpoint) compared to the other two quadrants (both at $p = 0.001$) who did not significantly differ from each other. Overall, these results align with what would be predicted based on the SCM, but did not align exactly with my hypotheses because Quadrants 1 and 2 did not significantly differ from one another as outlined by the SCM.

Figure 4.1. Study 3 two-dimensional depiction of mean ratings for warmth and competence for different categories of women separated by median splits of the variables

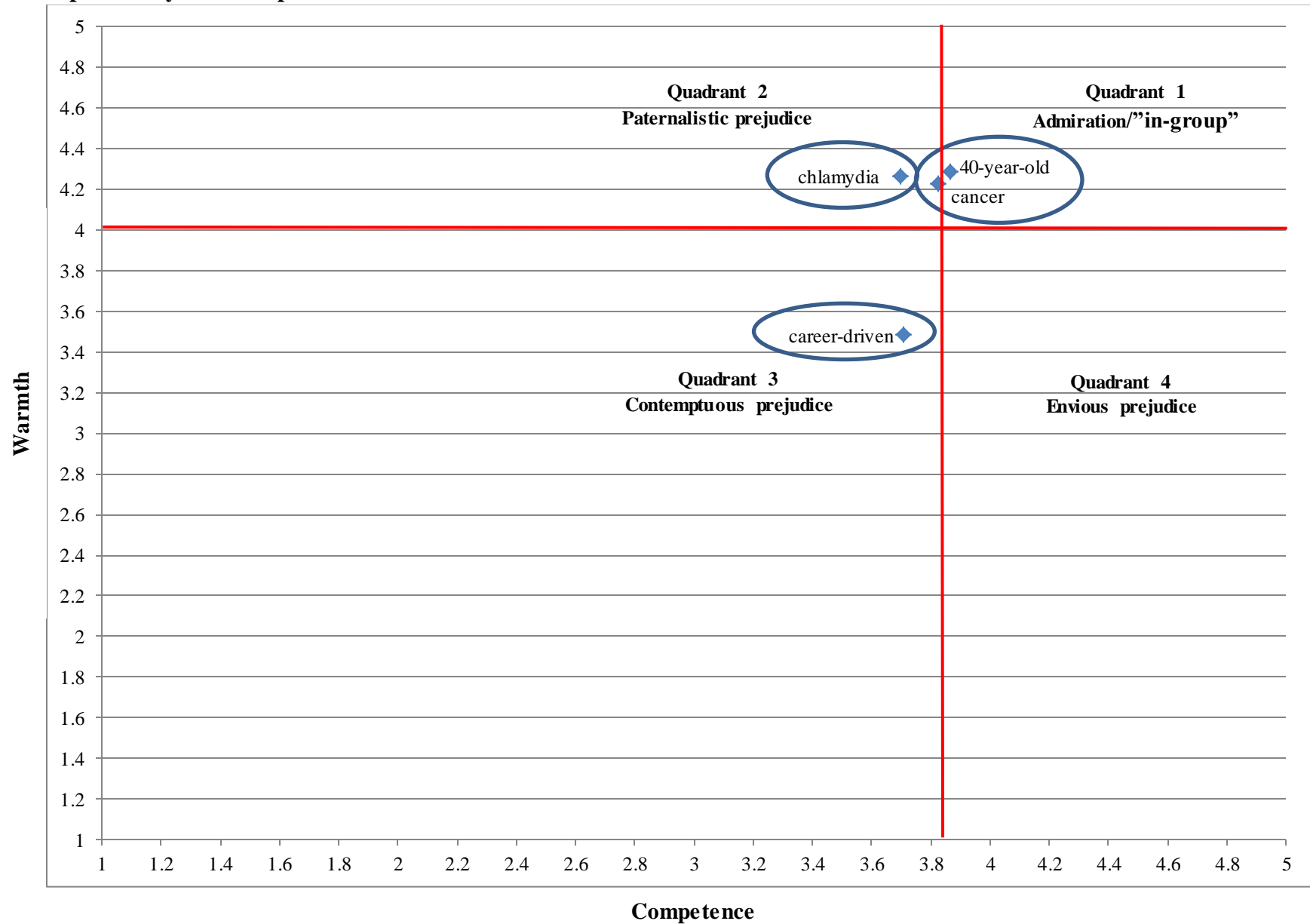


Table 4.5. Affective reaction means and standard deviations for each quadrant

	Admiration	Contempt	Envy	Pity/Sympathy
Quadrant 1 (in-group)	3.70 (0.90)	1.33 (0.64)	1.47 (0.68)	3.45 (0.89)
Quadrant 2 (paternalistic)	3.49 (0.83)	1.15 (0.26)	1.34 (0.54)	3.37 (0.83)
Quadrant 3 (contemptuous)	2.87 (1.17)	1.85 (1.07)	1.52 (0.67)	2.22 (0.90)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

4.7 Testing Hypotheses 3 and 4

I expected that women who did not fall into Quadrant 1 (admiration/in-group) would receive lower scores on the “good mother” scale (H3). In order to test this hypothesis, a one-way ANOVA was conducted to examine quadrant means on this variable. Results suggested an effect of quadrant, $F(3, 178) = 18.342, p < .001, \eta^2 = 0.01$, and the post hoc analyses indicated that while there was no significant difference between Quadrants 1 and 2, Quadrant 3 was rated significantly lower compared to Quadrants 1 and 2 (at $p < 0.001$). The lack of difference between Quadrants 1 and 2 was unexpected, but the lower rating received by Quadrant 3 aligned with my hypothesis. Although, the mean “good mother” rating for Quadrant 3 was above the scale midpoint indicating that this group was judged to be a moderately good mother (quadrant means in Table 4.6)

With respect to perceived responsibility/blame for fertility issues, I expected Quadrant 3 to receive higher ratings and Quadrants 1 and 2 to receive lower ratings (H4). This assumption was tested using a one-way ANOVA. Significant group differences with respect to perceptions of blame/responsibility were found, $F(2, 178) = 23.46, p < .001, \eta^2 = 0.05$ (quadrant means in Table 28 below). Post hoc analyses indicated no difference between Quadrants 2 and 3. However, Quadrant 1 received significantly lower ratings of blame/responsibility compared to Quadrants 2 and 3 (at $p < 0.001$). Overall though, none of the women were strongly blamed or held responsible as none of the means exceeded the scale midpoint. These results mostly aligned with my assumptions based on Weiner’s AAA model, except for Quadrant 2 receiving similar ratings of blame compared to Quadrant 3.

Table 4.6. Quadrant means for “good mother” and perceived responsibility for fertility status

	Good Mother	Blame/Responsibility
	M (SD)	Mean (SD)
Quadrant 1 (in-group)	4.50 (0.62)	1.44 (0.82)
Quadrant 2 (paternalistic)	4.45 (0.54)	2.34 (1.03)
Quadrant 3 (contemptuous)	3.78 (0.86)	2.63 (1.40)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

4.8 Testing Hypothesis 5

Based on Weiner's AAA model, groups who are blamed or considered more responsible for their fertility issues should elicit low levels of pity/sympathy, and subsequently receive more social censure and less help/support, while groups who are considered blameless or held less responsible should elicit more pity and receive more social support and help. As such, I expected to find a negative correlation between ratings of responsibility/blame and pity, and I also expected to find a positive correlation between pity and the support/helping behaviour variables.

4.8.1 Measuring the AAA model correlations. To test the proposed relationships between the AAA model variables, Pearson *r* correlations were calculated (see Table 4.7 for coefficients). In support of my expectations, the correlation coefficients suggested that there were significant relations between all the variables. More specifically, as predicted by Weiner's AAA model, attributions of blame were associated with less pity/sympathy and less willingness to help. As well, more pity/sympathy was associated with more willingness to help, on all support variables.

Table 4.7. Attribution-Affect-Action correlations for the sample

	Pity/sympathy	Access to treatment	Deserve treatment	Financial aid	Tax increase	Online funding
Responsibility/Blame	-0.23**	-0.40**	-0.43**	-0.54**	-0.33**	-0.25**
Pity/sympathy		0.36**	0.39**	0.49**	0.41**	0.33**

* = correlation is significant at the 0.05 level (2-tailed).

** = correlation is significant at the 0.01 level (2-tailed).

4.9 Testing Hypothesis 6

Based on the AAA model, I expected that Quadrant 3 would receive lower ratings of support/helping behaviour compared to the other quadrants. These hypotheses were examined by calculating the quadrant means for each support/helping behaviour variable and then examining the mean differences with one-way ANOVAs. The quadrant means for each of the variables are denoted in Table 4.8. Results of the one-way ANOVA indicated that there was a significant difference with respect to how deserving participants thought that the quadrants were of accessing fertility treatments, $F(2, 179) = 9.24, p = .001, \eta^2 = 0.004$. Post hoc analyses indicated that Quadrant 3 was rated as less deserving than the other two quadrants (at $p = 0.001$ for both).

There was no significant difference between Quadrants 1 and 2. However, all the means were above the scale midpoint, suggesting participants still rated each quadrant as deserving of access. There was also a significant difference of quadrant regarding deservedness of receiving fertility treatments, $F(2, 179) = 14.69, p < .001, \eta^2 = 0.01$. Post hoc analyses indicated again that Quadrant 3 was rated as less deserving than the other two quadrants (at $p = 0.001$ for both). There was no significant difference between Quadrants 1 and 2. However, all the means were above the scale midpoint, suggesting participants still rated each quadrant as deserving of receiving fertility treatments.

With respect to deservedness of receiving financial aid for fertility treatments, results suggested a difference of quadrant, $F(2, 179) = 43.67, p < .001, \eta^2 = 0.03$, with post hoc analyses indicating that Quadrant 3 was rated as significantly less deserving (mean below the midpoint) compared to the other two quadrants (both at $p < 0.001$). Quadrant 2 was also rated as significantly less deserving of receiving financial aid for fertility treatments compared to Quadrant 1 ($p < 0.05$; both means above the midpoint). Results suggested a significant effect of quadrant with respect to participants' willingness to support a tax increase to cover fertility treatments, $F(2, 179) = 19.61, p < .001, \eta^2 = 0.02$. Post hoc analyses indicated that participants were significantly less supportive of a tax increase to assist Quadrant 3 in accessing fertility treatments (below the scale midpoint) compared to the other two quadrants (both at $p < 0.001$) who did not differ from each other (both means hovering around the midpoint). Results also suggested a significant effect of quadrant with respect to participant willingness to support online funding campaigns to cover the cost of fertility treatments, $F(2, 179) = 8.32, p = .001, \eta^2 = 0.01$, with post hoc analyses indicating that Quadrant 3 was least likely to receive support from participants (mean below the scale midpoint) compared to Quadrant 1 (at $p < 0.01$) and Quadrant 2 (at $p = 0.01$) who did not differ from each other (means both above the scale midpoint). Overall, these results aligned with my hypothesis that Quadrant 3 would receive less support from participants compared to the other quadrants.

Table 4.8. Helping behaviour/support variable means and standard deviations for each quadrant

	Should access IVF	Deserve to receive IVF	Deserve financial support IVF	Support for tax increase	Support for online funding
Quadrant 1 (in-group)	4.43 (0.84)	4.39 (0.74)	3.88 (0.95)	3.14 (1.04)	3.20 (0.97)
Quadrant 2 (paternalistic)	4.42 (0.67)	4.20 (0.64)	3.48 (0.81)	3.02 (0.89)	3.24 (0.98)
Quadrant 3 (contemptuous)	3.79 (1.05)	3.57 (1.09)	2.26 (1.01)	2.02 (0.95)	2.48 (1.19)

Note. Three 5-point response scales were used (1 = *strongly disagree* to 5 = *strongly agree*; 1 = *very undeserving* to 5 = *very deserving*; and, 1 = *very unwilling* to 5 = *very willing*).

4.10 Study 3 Discussion

In order to increase the robustness of the overall project and to allow for causal inferences to be made about the effect of manipulating the reason for each woman's fertility issues/need for access to ART on the SCM and AAA variables (i.e., competence, warmth, responsibility/blame, affective reactions, helping behaviour), the current study employed a between-group experimental design examining the social stereotypes and associated social sanctioning for involuntarily childless women within the framework of both the SCM and Weiner's AAA model. Overall, each woman was rated high on both competence and warmth, but by using median split values the women were separated into three of the four SCM quadrants. Statistically, Quadrant 3 elicited the least amount of warmth, which aligns with the SCM, yet there were no group differences with respect to competence as would be predicted with this theory. One potential explanation for the overall high competence and warmth evaluations of the women was the elicitation of personal beliefs rather than social stereotypes in the questionnaire, which tend to render more positive responses (Kunda, 1999; Heider et al., 2013). Another possibility is that the detail provided in the vignettes made all of the women appear warm and competent (e.g., "wants to be a mother"; enjoyed helping to care for younger brothers and sisters"; "active volunteer in community"; "well-liked by neighbours"; "stable job"; "financially stable").

Contrary to my hypothesis based on the SCM, the career-driven woman was allocated to Quadrant 3 (contemptuous) and not Quadrant 4 (envious). However, based on the means for competence and warmth and without the use of the median split she would have been allocated to Quadrant 1 along with all of the other women thus resulting in no differentiation between the groups. In past research, professional, or career-driven women, have been more ambivalently

stereotyped: they tend to receive respect for their assumed competence, agency, and power (Eagly, 1987; Eagly & Kite, 1987; Glick & Fiske, 1996; Glick et al., 1997; Fiske et al., 1999; 2002; Altermatt, DeWall, & Leskinen, 2003; DeWall et al., 2005; Fiske, 2010) while at the same time are often disliked and distrusted for their perceived lack of warmth and their competence which is considered threatening (Glick & Fiske, 2001a, 2001b; Fiske et al., 2002; Glick, 2002). There are a variety of potential explanations for the non-ambivalent negative reactions directed towards the career-driven woman in the current study. Historically, women who display competence or power have been discriminated against (Lott, 1985; Eagly, Makhijani, & Klonsky, 1992; Rudman & Glick, 1999; Rudman & Kilanski, 2000) and common derogatory labels for women in positions of power include “Iron Maiden”, “Ice Queen”, and “Ball Buster” (Cuddy et al., 2008). The career-focused women may have been perceived as less competent and warm, and subsequently was least admired, least pitied, most blamed for her fertility issues, and seen as a worse mother compared to the other women due to assumptions that she prioritized her career before motherhood, or because she intended “to have it all”. The motherhood mandate places pressure on women to conform to mothering expectations (Veevers, 1973; Russo, 1976; Miall, 1986; Menaghan, 1989; Koropecykj-Cox et al., 2007) while at the same time many women desire, and are required (i.e., for financial reasons in the current economic climate), to work and pursue careers (Rottinghaus & Zytowski, 2006; Appelbaum, Bousehy, & Schmitt, 2014; Knezevic, Gregov, & Simunic, 2016). However, women risk being labelled as less committed and/or incompetent (Bridges & Etaugh, 1995; Williams, Alon, & Bornstein, 2006) as well as less likable, less warm, and more hostile (Benard & Correll, 2010) if they choose both mothering and a career. Even though she has potentially delayed childbearing, this decision alone is insufficient for explaining the negative evaluations she received in contrast to the other women, particularly the 40-year-old. Further, one might expect that her intentions to pursue motherhood would protect her from being viewed as unfeminine and uncaring (Rudman & Glick, 1999; Campos, 2005). Yet it is possible that her desire to use surrogacy and avoid carrying her child herself can explain the lower levels of warmth she elicited compared to the other women. Intended mothers of surrogate babies may be considered the “true” mother due to genetics (if her own oocytes are used) and through raising the child, but a surrogate may also be considered the real mother because she carries the child and may even contribute genetically (if her oocytes are used) (Van

den Akker, 2007). Further still, concerns about women using surrogacy for non-medical reasons and out of “convenience” have been cited (Chliaoutakis et al., 2002; Robertson, 2016).

In line with my hypothesis, the 40-year old was allocated to Quadrant 1 (admired, in-group). Participants may have perceived the 40-year-old woman’s choice to delay childbearing as normative (Koert & Daniluk, 2017) and/or may not have been aware of the potential negative fertility outcomes associated with advanced maternal age (Johnson & Tough, 2012; Dougall et al., 2012). Considering the sample was made up of largely undergraduate childless women, participants may have felt a comradery with the 40-year-old because they may also have to delay childbearing for their education and/or careers. Contrary to my hypothesis though, the woman with cancer was also allocated to Quadrant 1, possibly due to being viewed as worthy of admiration for her pursuit of motherhood despite her illness. With the increase of scientific knowledge, the stigmatization of cancer has decreased (Knapp, Marziliano, & Moyer, 2014). Additionally, because cancer diagnoses are quite common in the modern world (Government of Canada, 2018) participants may have been reminded of a loved one who has faced this disease. However, the lack of specification of cancer type could be a potential limitation to the study as there has been support for differing views of patients based on the form of cancer they have developed (Knapp et al., 2014). For example, lung cancer is often highly stigmatized due to its association with smoking (Knapp et al., 2014; Mazieres et al., 2015). In addition, despite the fact that on average female fertility declines with age (Schmidt, Sabotka, Bentzen, & Nyboe Andersen, 2012; Fisch & Braun, 2013; Lawson & Fletcher, 2014; No, 2014; Johnson et al., 2015) and cancer can negatively impact a woman’s ability to become pregnant and carry a child (especially during treatment phases; Ron & Holzer, 2013), many individuals are unaware of this inevitability (Chan et al., 2015; Maeda et al., 2015; Jensen, Martins, & Parks, 2018). If participants were unaware of these common outcomes for people who delay childbearing and are faced with cancer, this could explain why they did not hold the women in Quadrant 1 highly responsible for their fertility issues.

Based on the results of Study 1, 2, and previous research (e.g., Hafer, 2000; Hafer et al., 2005) which highlights the negative evaluations of individuals with STIs, the allocation of the woman with chlamydia to Quadrant 2 (paternalistic) and the similar ratings of warmth, admiration, and ratings of being a good mother compared to Quadrant 1 was surprising. A possible explanation is that participants were familiar with chlamydia, which is likely since the

highest rates of this STI are reported among 20 to 24-year olds and the mean age for participants was close to 21 years (Public Health Agency of Canada, 2018). Rather than feeling contempt for her, participants may have felt pity/sympathy potentially because they may personally have experienced contracting the STI or knew someone who has contracted it. The positive ratings may also be because participants were asked to report their personal views rather than social stereotypes (Kunda, 1999; Heider et al., 2013). However, this group received similar ratings of blame/responsibility for their fertility issues as the career woman considering surrogacy. It is possible that participants understood that untreated chlamydia can lead to fertility issues, leading to more ambiguous perceptions of “Kate” who should have taken better care of her sexual health (Nack, 2008; Foster & Byers, 2013). Similarly to Study 2 though, the means for responsibility/blame for fertility issues were below the scale midpoint for all three of the quadrants suggesting that participants did not hold them particularly responsible/to blame for their fertility issues.

Despite some unexpected findings, many of my hypotheses for the current study were supported. Further, the results provided additional insight into the utility of the SCM and AAA model for examining stereotyping and stigma related to involuntarily childless women. These results also illuminated nuances in the stereotyping of these groups. Overall, the career-oriented woman considering surrogacy received the most negative evaluations compared to any other category. Contrary to previous research though, the other involuntarily childless women received quite positive evaluations from participants. A major strength of the current study was the experimental design which afforded increased internal validity. However, the robustness and external validity of the findings were still limited due to the undergraduate sample used. As such, a final study was conducted with a large nationally representative Canadian sample to increase the overall generalizability of the findings.

CHAPTER 5. STUDY 4

5.1 Study 4 Purpose

The intent of the present study was to replicate the experimental vignette design aspects of Study 3 and to also expand on it by recruiting a stratified by province, randomly selected Canadian sample of participants. There is much debate within the social sciences regarding the limits to external validity that the use of student samples can pose (e.g., Sears, 1986; Kam, Wilking, & Zechmesiter, 2007; Druckman & Kam, 2009). As such, the intent of the current study was to increase the potential external validity of this research by recruiting a more diverse sample from across Canada. Further, a cross-country sample allows for the examination of the opinions of a wide variety of individuals from provinces with varying policies related to fertility treatment coverage. As with Study 3, between groups comparisons were made possible through random assignment of participants to one of four brief vignettes describing a reproductively challenged women representing one of the four SCM quadrants (in-group/admiration, paternalistic, contemptuous, and envious). Again, participants rated the women in terms of warmth, competence, various affective reactions (pity, contempt, envy, and admiration), and subsequent behavioural consequences/social censure variables.

5.2 Study 4 Hypotheses

The hypotheses for the present study were the same as those posed in Study 3:

Hypothesis 1 (H1): The involuntarily childless women described in each vignette were expected to vary in terms of participant ratings of competence and warmth. These ratings will result in each woman falling into a distinct SCM quadrant.

Hypothesis 2 (H2): Each quadrant should elicit distinct affective reactions.

H2a: Quadrant 1 will elicit more admiration compared to the other quadrants.

H2b: Quadrant 2 will elicit more pity/sympathy compared to the other quadrants.

H2c: Quadrant 3 will elicit more contempt compared to the other quadrants.

H2d: Quadrant 4 will elicit more envy compared to the other quadrants.

Hypothesis 3 (H3): Women in Quadrant 1 (admiration/in-group) will be rated highest of all on the “good mother” scale.

Hypothesis 4 (H4): As outlined by Weiner’s AAA model, each quadrant should receive differential ratings of responsibility/blame for their fertility issues depending on the perceived locus of control for their fertility issues.

H4a: Quadrants 3 and 4 will receive higher ratings of responsibility/blame compared to the Quadrants 1 and 2.

Hypothesis 5 (H5): As expected based on Weiner's AAA model, ratings of responsibility/blame will be negatively correlated with ratings of pity/sympathy. Further, ratings of both pity/sympathy and blame/responsibility will be positively correlated with support/helping behaviour.

Hypothesis H6 (H6): Based on the AAA model, it was expected that the quadrants would receive differential ratings of support/helping behaviour.

H6a: Quadrants 3 and 4 will receive lower ratings of support/helping behaviour compared to the other quadrants.

H6b: Quadrants 1 and 2 will receive higher ratings of support/helping behaviour compared to the other quadrants.

5.3 Study 4 Participants and Procedure

The current study was approved by the University of Saskatchewan Research Ethics Board (Beh #17-345). Five hundred and fifty-four individuals [270 males (49.1%), 278 females (50.5%), 2 "other" (0.4%), 4 no response (0.07%)] recruited through Ekos/Probit with a mean age of 47.28 years (SD = 15.37; range = 18 to 85) completed the online questionnaire. Most of the sample reported being born in Canada (88.7%), identifying as Canadian (98.5%), residing in Ontario (44.4%), and identifying as White or European (85.4%). Most of the sample identified either with the Liberal (33.7%), Conservative (28.6%), or New Democratic (19.0%) parties of Canada. In terms of socioeconomic status, the highest level of education completed by most participants was an undergraduate degree (35.0%) or certificate program/technical diploma (26.6%) and more than half of the sample made \$60,000 a year or more (before taxes). More than three quarters of the sample identified as either being married/common-law spouse (66.2%) or single/not in a committed relationship (19.7%) and much of the sample indicated that they currently have at least one biological child (60.4%). Most respondents who do not currently have biological children indicated that they did not intend on having biological children in the future (59.1%). Please refer to Tables 5.1 and 5.2 for a full break down of the participant demographics.

Table 5.1. Study 4 participant demographics

Province of residence (N = 554)	Frequency
Alberta	95 (17.1%)
British Columbia	76 (13.7%)
Manitoba	16 (2.9%)
New Brunswick	17 (3.1%)
Newfoundland	13 (2.3%)
Nova Scotia	32 (5.8%)
Ontario	246 (44.4%)
Prince Edward Island	3 (0.5%)
Quebec	21 (3.8%)
Saskatchewan	27 (4.8%)
Yukon	2 (0.4%)
Political orientation (N = 546)	Frequency
Liberal Party of Canada	184 (33.7%)
Conservative Party of Canada	156 (28.6%)
New Democratic Party (NDP)	104 (19.0%)
Green Party of Canada	45 (8.2%)
Other (e.g., Bloc Québécois, Communist, floating voter, no orientation, Libertarian, mixed, undecided, prefer not to say)	57 (10.4%)
Religious affiliation (N = 546)	Frequency
Christianity - Protestantism	154 (28.2%)
Atheism (not religious)	147 (26.9%)
Christianity - Catholicism	106 (19.4%)
Agnosticism (uncertain)	81 (14.8%)
Buddhism, Judaism, Islam (Muslim), or Hinduism	14 (2.6%)
Other (e.g., Christian non-Protestantism, Druidism, spiritual, humanist, Indigenous spirituality, Mormon, none, Pagan, Pantheism, prefer not to answer, science, Sikh, Taoism, Triangular Symmetry, undecided, Unitarian, Veganism)	44 (8.1%)
Relationship status (N = 548)	Frequency
Married/Common-law spouse	363 (66.2%)
Single (not in a committed relationship)	108 (19.7%)
Separated/Divorced	46 (8.4%)
Widowed	22 (4.0%)
Other (e.g., polyamorous, in a committed, long-term relationship and not married, dating)	9 (1.6%)

Table 5.2. Study 4 participant demographics (continued)

Highest level of education completed (N = 546)	Frequency
Undergraduate degree	191 (35.0%)
Certificate program/Technical diploma	145 (26.6%)
High school	88 (16.1%)
Graduate degree (Master's or PhD)	86 (15.8%)
Professional degree (e.g., medical or law school)	19 (3.5%)
Elementary school	3 (0.5%)
Other (e.g., associate degree, college degree, post-graduate certificate, prefer not to answer, registered nurse, home-schooled, some college or university, trade journeyman)	14 (2.6%)
Yearly income before taxes in CDN dollars (N = 529)	Frequency
\$0 to \$19,999	37 (7.0%)
\$20,000 to \$39,999	76 (14.4%)
\$40,000 to \$59,999	96 (18.1%)
\$60,000 to \$79,999	122 (23.1%)
\$80,000 to \$99,999	79 (14.9%)
\$100,000 to \$119,999	52 (9.8%)
\$120,000 to \$139,999	24 (4.5%)
\$140,000 or more	43 (8.1%)

Half of the sample indicated that they were either *likely* or *extremely likely* (50.8%) to access medical fertility treatments if personally faced with conception difficulties in the future, and most individuals correctly estimated the cost of one IVF attempt, which can range from \$10,000 to upwards of \$20,000 (Chambers et al., 2009; Bouzayen & Eggertson, 2010; Smith et al., 2011; Teoh & Maheshari, 2014). Further, a large proportion of participants were personally unwilling to spend more than \$1000 on fertility treatments (Table 5.3).

Table 5.3. Participant intentions regarding future access of fertility treatments

Likelihood of accessing medical fertility treatments (N = 551)	Frequency
Extremely likely	131 (23.8%)
Likely	149 (27.0%)
Neither likely not unlikely	69 (12.5%)
Unlikely	75 (13.6%)
Not at all likely	127 (23.0%)

Table 5.4. Participant beliefs regarding cost of fertility treatments

Perceived estimated cost of one IVF round (N = 545)	Frequency
Under \$1000 CDN	18 (3.3%)
\$1000 to \$1999 CDN	20 (3.7%)
\$2000 to \$3999 CDN	47 (8.6%)
\$4000 to \$5999 CDN	96 (17.6%)
\$6000 to \$7999 CDN	29 (5.3%)
\$8000 to \$9,999 CDN	43 (7.9%)
\$10,000 to \$11,999 CDN	162 (29.7%)
\$12,000 to \$13,999 CDN	30 (5.5%)
\$14,000 CDN or more	100 (18.3%)
 Amount willing to spend on fertility treatments (N = 516)	 Frequency
Under \$1000 CDN	172 (33.3%)
\$1000 to \$1999 CDN	51 (9.9%)
\$2000 to \$3999 CDN	47 (9.1%)
\$4000 to \$5999 CDN	70 (13.6%)
\$6000 to \$7999 CDN	15 (2.9%)
\$8000 to \$9,999 CDN	27 (5.2%)
\$10,000 to \$11,999 CDN	47 (9.1%)
\$12,000 to \$13,999 CDN	4 (0.8%)
\$14,000 CDN or more	83 (16.1%)

Note. The sample sizes alter due to non-responses.

The procedure for participants in the current study was nearly identical to Study 3, except for the recruitment method and online questionnaire platform: participants signed up to the complete the study through Ekos/Probit (a Canadian-based research vendor and platform which offers research participant recruitment products and management) which directed them to the online questionnaire hosted on Voxco (a Canadian-owned and managed company whose data are securely stored in Canada). It was requested that Ekos/Probit obtain a stratified by province, random, representative sample of English-speaking participants who were 18 years or older in any Canadian province. An email about the study was issued by Ekos/Probit to all subscribed members, which included the study advertisement and consent form (Appendix M). Participation in the current research via Ekos/Probit was strictly voluntary and participants received no remuneration. After reading the consent form and checking “yes” to signify their consent, participants were randomly assigned one of four vignettes and then completed the questionnaire assessing the components of the SCM and Weiner’s AAA model, including warmth, competence, affective reactions, and behavioural consequences/social censure variables

(Appendix N). At the end of the questionnaire, participants were given a debriefing form (Appendix O) which further explained the rationale for the study.

5.4 Study 4 Materials

5.4.1 Online questionnaire and vignettes. The same vignettes from Study 3 were used in the current study. Each vignette described a woman named “Kate” who required access to fertility treatments due to a medical condition or lifestyle choice.

5.4.2 Manipulation check. Participants were asked to identify “Kate’s” age, whether she works outside of the home, and the length of time she has been married to ensure that they had carefully read the assigned vignette. The manipulation check item embedded with these questions asked participants to identify the reason “Kate” was pursuing in vitro fertilization (IVF) as indicated in the vignette they read. In total, 6 individuals incorrectly identified the reasons for fertility issues based on the vignette they read and so were removed from the data set.

5.4.3 Stereotype Content Model items: Attributions and affective reactions. Using a 5-point scale (1 = *not at all* to 5 = *extremely*), participants rated “Kate” in terms of how confident, competent, capable, efficient, intelligent, skillful, sincere, warm, well-intentioned, trustworthy, good-natured, and friendly they perceived her to be. A composite/mean score was created for both competence (confident + competent + capable + efficient + intelligent + skillful /6) and warmth (sincere + warm + well-intentioned + trustworthy + good-natured + friendly /6). Cronbach’s alpha for the competence composite was $\alpha = .92$ and $\alpha = .93$ for warmth, both of which are considered good (Nunnally & Bernstein, 1994; Bland & Altman, 1997; DeVillis, 2003).

Participants were also asked to rate the affective reactions “Kate” elicited. For the current study, changes were made to the questionnaire used in Study 3 which included the addition of: “charitable”, “supportive”, and “kindness” affective reaction variables to supplement the “pity”, “sympathy”, and “compassionate” variables which yielded a relatively lower Cronbach’s alpha value. Using a scale of 1 (*not at all*) to 5 (*extremely*), participants rated the extent to which they believed “Kate” made them personally feel proud, inspired, fond, admiring, respectful, accepting, angry, irritated, uneasy, disgusted, frustrated, hateful, envious, jealous, resentful, discontented, begrudging, anxious, pity, sympathy, compassionate, charitable, supportive, and kindness. Composites/mean scores were created for admiration (proud + inspired + fond + admiring + respectful + accepting/6), contempt (angry + irritated + uneasy + disgusted + frustrated + hateful/6), envy (envious + jealous + resentful + discontented + begrudging +

anxious/6), and pity/sympathy (pity + sympathy + compassionate + charitable + supportive + kindness/6). Cronbach's alpha for each composite variable are as follows: $\alpha = .94$ for admiration, $\alpha = .92$ for contempt, $\alpha = .90$ for envy, and $\alpha = .86$ for pity/sympathy. These values are all considered good (Nunnally & Bernstein, 1994; Bland & Altman, 1997; DeVillis, 2003).

5.4.4 Additional attributions: Perceived mothering competence and responsibility for fertility issues. With a five-point scale (1 = *not at all* to 5 = *extremely*) participants reported to what extent they believed "Kate" was a: competent mother; nurturing mother; capable mother; hard-working mother; and, loving mother. The mean ratings for each of these variables were then averaged together to create the "good mother" construct. Participants were also asked to report how responsible they felt "Kate" was for her fertility problems. Using a five-point scale (1 = *not at all* to 5 = *extremely*) participants rated to what extent "Kate" was: responsible for her fertility problems; to blame for her fertility problems; at fault for her fertility problems; and, personally accountable for her fertility problems. The mean ratings for each variable were then averaged together to create the "responsible for fertility issues" construct. Cronbach's alpha for the "good mother" construct was $\alpha = .95$ and $\alpha = .91$ for the "responsible for fertility issues" construct, which again were both within the good scale range (Nunnally & Bernstein, 1994; Bland & Altman, 1997; DeVillis, 2003).

5.4.5 Helping behaviour/support variables. For the current study additional behavioural reaction/social sanctioning variables which more closely aligned with my overall research questions were included. Specifically, participants were asked: to what extent they agreed "Kate" *should have access to IVF* (five-point scale, 1 = *strongly disagree* to 5 = *strongly agree*); *how deserving* they thought "Kate" was of receiving IVF (five-point scale, 1 = *very undeserving* to 5 = *very deserving*); to what extent they agreed *the cost of "Kate's" IVF treatment should be covered under Canada's universal health care net* (five-point scale, 1 = *strongly disagree* to 5 = *strongly agree*); how supportive they would be of an *increase in their yearly taxes to ensure the cost of IVF for "Kate" could be covered under Canada's universal health care net* (five-point scale, 1 = *very unsupportive* to 5 = *very supportive*); how willing they would be to *donate money to "Kate" if she were to personally raise money through online means* (five-point scale, 1 = *very unwilling* to 5 = *very willing*); how much money they would be willing to donate to "Kate" in her attempts to raise money online for IVF (dollar amount entered); to what extent they agreed *private Canadian insurance companies should fully cover the cost of IVF*

(five-point scale, 1 = *strongly disagree* to 5 = *strongly agree*); and to what extent they agreed places of employment should offer extended medical coverage for IVF (five-point scale, 1 = *strongly disagree* to 5 = *strongly agree*).

5.5 Study 4 Results

5.5.1 Testing hypothesis 1. Determining whether the involuntarily childless women varied in terms of participant ratings of competence and warmth was the first task for examining this data. To test these hypotheses, competence and warmth ratings for each woman were averaged across participants (Table 5.4). All of the means exceeded the scale midpoints, suggesting participants rated the four women relatively high on competence and warmth.

Table 5.5. Competence and warmth means for each woman and quadrant

	Competence	Warmth
29-year-old chlamydia (n = 152)	3.84 (0.71)	3.93 (0.75)
29-year-old cancer (n = 118)	3.95 (0.57)	4.01 (0.58)
40-year-old delayed childbearing (n = 130)	3.94 (0.63)	3.92 (0.64)
29-year-old career driven (n = 133)	3.58 (0.75)	3.39 (0.83)
Quadrant 2 (paternalistic) (n = 118)	3.95 (0.57)	4.01 (0.58)
Quadrant 3 (contemptuous) (n = 415)	3.79 (0.71)	3.75 (0.78)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*).

5.5.2 Creating groupings via median split. Following calculation of the competence and warmth means, the median splits for these variables were calculated. The median value for both competence and warmth was 4.00. As with Studies 1, 2, and 3 these median values were then used to create the quadrant boundaries. Using the medians and means for competence and warmth, the groups of women were then arrayed on a two-dimensional Competence X Warmth space (Figure 5.1). Groups who were below the median for competence and above the median for warmth based on the mean ratings of competence and warmth they received were allocated to Quadrant 2 (paternalistic), which included the woman with cancer. As well, groups who were below the medians for both competence and warmth based on the mean ratings of competence and warmth they received were allocated to Quadrant 3 (contemptuous), which included the woman with chlamydia, 40-year-old woman who delayed childbearing, and the career-focused woman considering surrogacy. None of the women were allocated to Quadrant 1 (admiration, in-group) or Quadrant 4 (envious).

5.5.3 Confirming separation of the groups based on mean ratings of competence and warmth. To statistically confirm separation of the women into the quadrants, independent samples t-tests with competence and warmth as the dependent variables were calculated. Results suggested a significant difference between the quadrants for competence, $t(244.2) = 2.96, p < 0.005, d = 0.25$, with Quadrant 2 being higher in competence compared to Quadrant 3. With respect to warmth, results suggested a significant difference between the quadrants, $t(255.1) = 3.99, p < .001, d = 0.38$, with Quadrant 2 being higher in warmth compared to Quadrant 3. These results support the use of the median split for differentiating the women into the quadrants.

5.6 Testing Hypothesis 2

As with my first three studies, I expected each quadrant to elicit distinct affective reactions as outlined by the SCM. This assumption was tested by first calculating the affective reaction means for each quadrant and then independent samples t-tests were calculated to statistically compare the means. The affective reaction means for each quadrant are denoted in Table 5.5. There was a significant difference between the quadrants with respect to admiration, $t(203.3) = 3.76, p < .001, d = 0.38$, with Quadrant 2 being more admired than Quadrant 3. Results also suggested a significant difference between the quadrants for contempt, $t(354.9) = -5.99, p < .001, d = 0.53$, with Quadrant 3 receiving higher ratings of contempt compared to Quadrant 2. With respect to envy, there was a significant difference between the quadrants, $t(299.4) = -3.47, p = .001, d = 0.32$, with Quadrant 3 being more envied by participants than Quadrant 2. Finally, there was a significant difference between the quadrants with respect to pity/sympathy, $t(209.2) = 3.62, p < .001, d = 0.37$, with Quadrant 2 receiving higher ratings of pity/sympathy compared to Quadrant 3. Since none of the women were allocated to Quadrants 1 or 4, hypotheses regarding the affective reactions they elicited could not be examined.

Figure 5.1. Study 4 two-dimensional depiction of mean ratings for warmth and competence for different categories of women separated by median splits of the variables

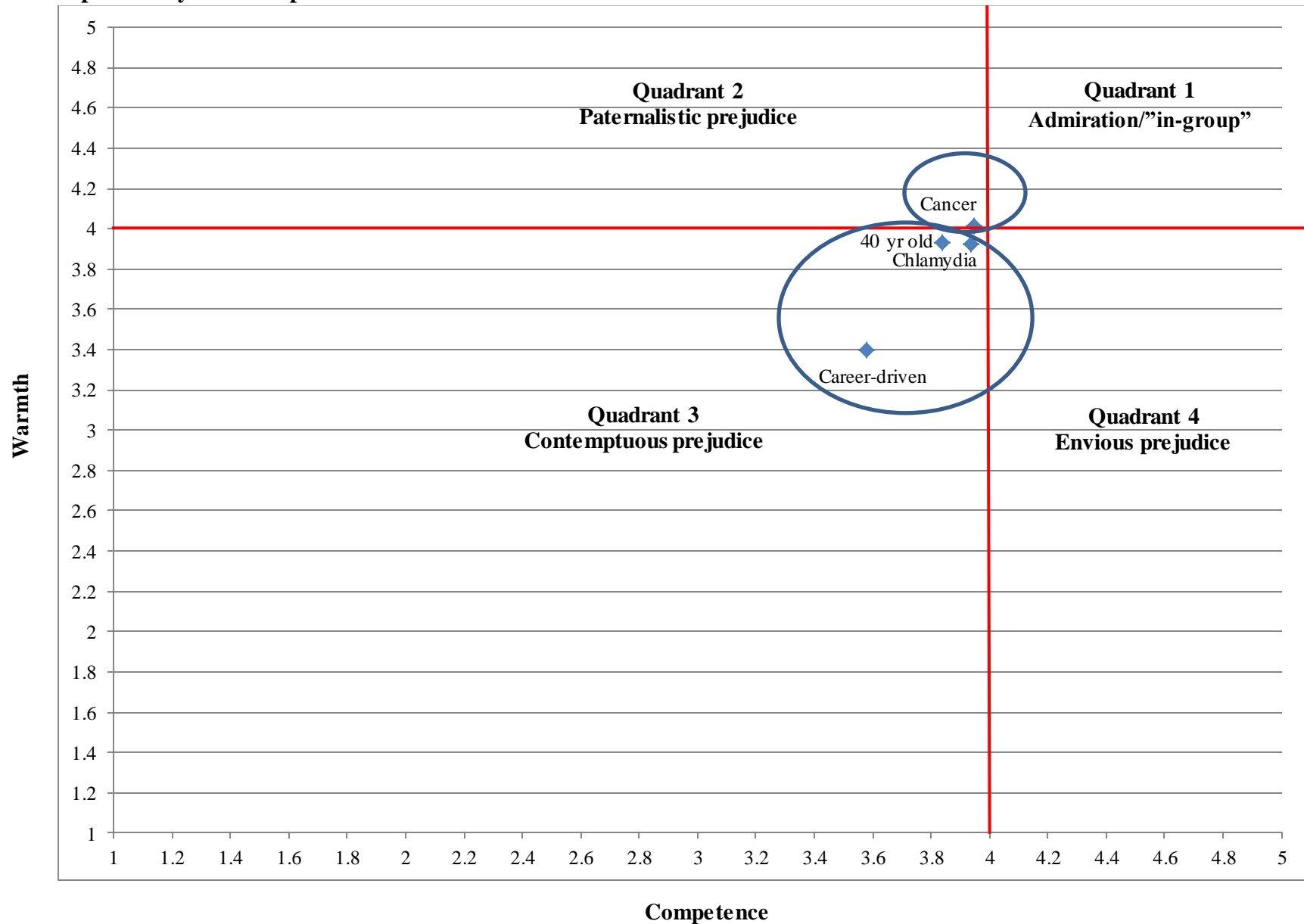


Table 5.6. Affective reaction means and standard deviations for each quadrant

	Admiration	Contempt	Envy	Pity/Sympathy
Quadrant 2 (paternalistic)	3.45 (1.03)	1.21 (0.46)	1.20 (0.44)	3.28 (0.88)
Quadrant 3 (contemptuous)	3.05 (1.05)	1.56 (0.82)	1.38 (0.66)	2.95 (0.92)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*). The sample sizes for Quadrant 2 relating to each variable range from $n = 122$ to $n = 124$ and the sample sizes for Quadrant 3 ranged from $n = 417$ to $n = 423$.

5.7 Testing Hypothesis 3 and 4

It was expected that any groups who did not fall within Quadrant 1 (admiration) would be considered to not be a good mother (H3). Because none of the women fell into Quadrant 1, this hypothesis could not be tested. However, an independent samples t-test was conducted to examine potential differences between the represented quadrants with respect to participant perceptions of good mothering. Results suggested differences between the quadrants, $t(251) = 3.96, p < .001, d = 0.37$ (quadrant means in Table 5.6), with Quadrant 2 receiving higher ratings of being a good mother compared to Quadrant 3. However, both quadrant means were above the scale midpoint suggesting both groups were perceived as good mothers.

With respect to responsibility/blame, I expected Quadrant 3 to receive higher ratings of responsibility/blame compared to Quadrant 2 (H4). To test this assumption, an independent t-test was conducted. Results suggested a significant difference between the quadrants, $t(525.6) = -10.10, p < .001, d = 1.23$ (quadrant means in Table 5.6), with Quadrant 3 receiving higher ratings of blame/responsibility compared to Quadrant 2. However, neither of the means for the quadrants exceeded the scale midpoint, suggesting they were not strongly blame/held responsible for their fertility issues. Overall, my hypothesis was supported in that Quadrant 3 received higher ratings of blame/responsibility compared to Quadrant 2.

Table 5.7. Quadrant means and standard deviations for perceived responsibility for fertility status and perceptions of being a good mother

	Quadrant 2 (paternalistic)	Quadrant 3 (contemptuous)
Perceptions of being a good mother	4.18 (0.62)	3.91 (0.83)
Blame/Responsibility	1.19 (0.42)	2.26 (1.16)

Note. A 5-point response scale was used (1 = *not at all* to 5 = *extremely*). Also, the sample sizes for Quadrants 2 for these variables were $n = 124$ and $n = 119$, respectively, while the sample sizes for Quadrant 3 on these variables were $n = 424$ and $n = 421$, respectively.

5.8 Testing Hypothesis 5

Based on Weiner's AAA model, I expected there to be a significant negative correlation between ratings of blame/responsibility and pity/sympathy. I also expected that ratings of both pity/sympathy and blame/responsibility would be positively associated with support/helping behaviour. These assumptions were tested using Pearson r correlation calculations (see Table 5.7 for coefficients). The results did not show support for the expected relationship between responsibility/blame and pity/sympathy. However, the expected relationships between the support/helping behaviours and both responsibility/blame and pity/sympathy were supported in the results. Specifically, more pity/sympathy was associated with a greater willingness to offer support. Overall, these results provide partial support for the hypotheses based on Weiner's AAA model.

Table 5.8. Attribution-Affect-Action correlations for the sample

	Responsibility/Blame	Pity/Sympathy
Pity/Sympathy	-0.06	
Should access IVF	-0.31**	0.21**
Deserve to receive IVF	-0.25**	0.20**
IVF healthcare coverage	-0.33**	0.20**
Support for tax increase	-0.29**	0.22**
Support for online funding	-0.30**	0.17**
Insurance company coverage	-0.25**	0.19**
Employment benefits coverage	-0.22**	0.15**

* = correlation is significant at the 0.05 level (2-tailed).

** = correlation is significant at the 0.01 level (2-tailed).

5.9 Testing Hypothesis 6

Based on the AAA model, I expected that Quadrant 3 would receive lower ratings of support/helping behaviour compared to Quadrant 2. This hypothesis was examined by calculating the quadrant means for each support/helping behaviour variable and then examining the mean differences with independent samples t -tests. The quadrant means for each of the variables are denoted in Table 5.8. Results of an independent t -test suggested a significant difference between Quadrants 2 and 3, $t(247.4) = 4.51$, $p < .001$, $d = 0.43$, with Quadrant 2 receiving more support. Compared to Quadrant 3, Quadrant 2: was also perceived as more deserving to receive IVF, $t(242.2) = 4.72$, $p < .001$, $d = 0.45$; elicited more support IVF to be covered within Canada's healthcare net, $t(221) = 5.43$, $p < .001$, $d = 0.54$; and elicited more support for a tax increase so that IVF could be covered, $t(199.5) = 3.98$, $p < .001$, $d = 0.40$, yet

the mean hovered around the scale midpoint. Further, compared to Quadrant 3, Quadrant 2: elicited more participant willingness to donate money online for fertility treatments, $t(207.9) = 5.68, p < .001, d = 0.57$, and elicited more support for IVF to be covered by insurance companies, $t(212.6) = 3.50, p = .001, d = 0.35$. There was no significant difference between the quadrants on support for IVF to be covered by employment benefits, $t(190.5) = 1.66, p = ns$. Overall, Quadrant 2 received more support from participants, which aligns with my hypotheses.

Table 5.9. Helping behaviour/support variable quadrant means and standard deviations

	Quadrant 2 (paternalistic)	Quadrant 3 (contemptuous)
Should access IVF	4.37 (0.89)	3.94 (1.12)
Deserve to receive IVF	4.21 (0.87)	3.77 (1.07)
IVF healthcare coverage	3.44 (1.27)	2.71 (1.43)
Support for tax increase	3.01 (1.33)	2.47 (1.33)
Support for online funding	3.10 (1.04)	2.49 (1.10)
Insurance company coverage	3.69 (1.05)	3.31 (1.12)
Employment benefits coverage	3.50 (1.20)	3.30 (1.14)

Note. Four 5-point response scales were used (1 = *strongly disagree* to 5 = *strongly agree*; 1 = *very undeserving* to 5 = *very deserving*; 1 = *very unsupportive* to 5 = *very supportive*; and, 1 = *very unwilling* to 5 = *very willing*). The sample size for Quadrant 2 was each variable ranged between $n = 123$ and $n = 124$ and the sample size for Quadrant 3 ranged from $n = 424$ and $n = 429$.

5.10 Study 4 Discussion

For the final study of my dissertation, the intent was to not only replicate the experimental design of Study 3, but also expand on it by recruiting a stratified by province, randomly selected Canadian sample of participants to increase the external validity of the results. As with Study 3, the mean ratings of competence, warmth, and the good mother variable were high for each quadrant while ratings of blame/responsibility were low overall. The overall positive evaluations may have related to the elicitation of personal beliefs which tend to be more positive when compared to eliciting social stereotypes (Kunda, 1999; Heider et al., 2013). As with Study 3, the descriptions of “Kate” in the vignettes may also have prompted such positive ratings. For example, “Kate” was described as desiring motherhood, growing up in a large family, caring for her younger brothers and sisters, married to her partner for 5 years, and being liked by her neighbours which could all signify warmth. She was also described as having a stable job and being financially stable which could signify competence.

The woman with cancer is likely to have received more positive evaluations compared to the other women due to her illness-status. Ambivalent evaluations where individuals with an

illness are viewed as low-status and incompetent but warm are common (Fiske et al., 2002; Cuddy et al., 2007; Louvet et al., 2009; Louvet & Rohmer, 2010). While it is also possible that participants may have wanted to appear unprejudiced towards someone with an illness (Damburn & Guimond, 2004; Rohmer & Lovet, 2012), the stigmatization of many forms of cancer has decreased presumably due to increased scientific knowledge (Knapp et al., 2014) and possibly even the higher rates of diagnosis among the general population (Government of Canada, 2018). While participants may have pitied this woman because of her illness, they might have admired for her pursuit of motherhood in the face of her illness. While there are some exceptions (e.g., lung cancer and its association with smoking), cancer tends to be viewed as an uncontrollable illness (Hegarty & Golden, 2008; Lebel & Devins, 2008; Marlow et al., 2010; Shepherd & Gerend, 2013) which might explain the relatively lower responsibility/blame rating that this woman received. However, the lower responsibility/blame ratings overall for Quadrants 2 and 3 could be explained by participant's beliefs regarding infertility. For example, participants may not have known the associated fertility risks with delayed childbearing (Fisch & Braun, 2013; Lawson & Fletcher, 2014; No, 2014; Johnson et al., 2015) or cancer (Chan et al., 2015; Maeda et al., 2015; Jensen et al., 2018).

The allocation of the woman with an STI to Quadrant 3 (contemptuous) aligns with the results of Study 1 and findings of other researchers which highlight the stigmatization of people with STIs (Nack, 2008; Foster & Byers, 2013), but especially women afflicted by them (Smith et al., 2008; East et al., 2012). As with Study 3, the allocation of the career-oriented woman considering surrogacy could be due to her intentions to balance career and motherhood (Williams et al., 2006; Benard & Correll, 2010) or even her decision to use surrogacy rather than carry the child herself (Van den Akker, 2007; Robertson, 2016). The allocation of the 40-year-old woman to Quadrant 3 did not align with results from Studies 1, 2, or 3. The current results suggest that participants may have had a better understanding about the potential risks to fertility associated with advanced maternal age (Johnson & Tough, 2012; Dougall et al., 2012) and assumed this woman did not prioritize motherhood over other life decisions (McQuillan et al., 2008; Settle & Brumley, 2014; Koropecj-Cox et al., 2015; Koropecj-Cox et al., 2018). Overall, participants were less willing to support/help these women in their access to fertility treatments.

Despite some unexpected findings, overall my hypotheses for the current study were largely supported. Results also provided further support for the utility of the SCM and AAA model for examining stereotyping and stigma associated with involuntarily childless women. Additional insight was also gained regarding differences in stereotyping associated with these groups. In particular, the stereotyping of involuntarily childless women was in some cases quite positive. While the 40-year-old, career-oriented, and chlamydia-afflicted women were rated generally less positively compared to the woman with cancer, they were all viewed as potentially good mothers, not responsible/to blame for their fertility plights, and moderately high in warmth and competence characteristics. Overall, the findings for the current study were strengthened by employing a large, nationally-representative, English-speaking Canadian sample.

CHAPTER 6. GENERAL DISCUSSION

The purpose of this dissertation was to examine the publicly enacted stigma and stereotyping of involuntarily childless women as well as some of the potential social censure and sanctioning projected on them. This was achieved by applying two theoretical models: the SCM and AAA model. Across four studies, two of which were purely correlational in nature and two that were experimental designs using vignettes, these frameworks allowed me to examine attributions associated with differing groups of involuntarily childless women, the affective reactions elicited by them, and the subsequent support offered by participants for the groups to access ART. My specific research questions included: What are the dominant societal perceptions of different categories of involuntarily childless women? What are the affective reactions elicited by each category? What are the social sanctions placed on each category?

Across each of the studies, a clear pattern emerged: some involuntarily childless women were more negatively stereotyped compared to others. Women presumed to be: 1) sexually irresponsible/promiscuous due to their STI status; 2) capable of personally affording fertility treatments; 3) trying to “have it all” (career and motherhood); and/or, avoiding the experience of pregnancy by using a surrogate tended to be held more responsible, evoked more contempt, and were not admired, envied, pitied, nor seen as deserving of financial support in their pursuit of fertility treatments compared to other groups of women. In Studies 1, 2, and 4 the woman with an untreated STI (chlamydia) received comparatively more negative evaluations, while in Studies 3 and 4 the career-driven woman considering surrogacy emerged as the most negatively stereotyped. Despite both the STI-plagued woman and career-driven woman considering surrogacy being attributed with relatively higher ratings of responsibility/blame, there were different potential explanations posed for why they received this attribution. First, the presumption that the woman with an STI had an internal locus of control may be the result of participant beliefs that the sexual behaviour that “Kate” engaged in was voluntary (Smith & Nave, 2007) or due to their beliefs around STI contraction. For example, many people believe that STIs are the result of individualized “risky” sexual behaviours such as lack of barrier/condom use, engagement in sexual behaviours under the influence of alcohol and/or drugs, and engagement in sexual behaviours with multiple partners (Fortenberry, 2004; Young, Nussbaum, & Monin, 2007). Second, the presumption that the career-oriented woman had an internal locus of control may be due to participant beliefs that she is responsible due to her

perceived competence. In turn, the perceived responsibility of these women resulted in participants' lower willingness to support their access to fertility treatment. Overall, these results suggest that helping behaviour was contingent on these women possessing a clean bill of health and prioritizing motherhood, both of which are situations presumably under individual control. Development and implementation of interventions to lower STI-related stigma and increase fertility knowledge overall is one option for addressing the negative judgements towards the woman with an STI/chlamydia. The focus of interventions intended to decrease negative judgements towards the career-driven woman considering surrogacy may be a bit more complicated to articulate as the violation of gender norms by not prioritizing motherhood and her presumed wealth makes it questionable that people would change their views. However, what might be more effective is a focus on social norms around the changing roles of women to balance career and motherhood.

Contrary to much of the literature on perceptions of childless individuals (e.g., Reed, 2012; Koropecykj-Cox et al., 2015; Koropecykj-Cox et al., 2018), overall many of the women in the present research were positively evaluated. In each study, the woman with an unspecified illness/cancer was not blamed/held responsible for her fertility issues, eliciting both pity/sympathy and offers of financial support for fertility treatment access, and in Study 3 she elicited admiration and was considered an "in-group" member to participants. In Study 3 and 4, all of the women were considered to be competent, warm, and "in-group" members prior to applying the median split for further analyses. Further, none of the women were ever considered to be "bad mothers" and participants thought that they "deserved to access and receive IVF" to realize their biological motherhood intentions. While some women were perceived as relatively more responsible for their fertility issues and elicited relatively more contempt compared to others, the means for these variables were below the scale midpoint. As previously noted, there are a variety of potential explanations for why many of the groups of women examined in this project were positively evaluated, including changing norms around childlessness, low fertility knowledge, elicitation of personal beliefs rather than social stereotypes, positive vignette descriptions, social desirability due to the elicitation of personal views rather than social stereotypes, and lack of familiarity or personal relationship between the subjects and participants. Additionally, the results could be explained by the types of variables on which participants were asked to evaluate the groups of women. While the variables assessed in the current study were

derived from the employed theoretical models (SCM and AAA), stigma and stereotyping related to involuntary childlessness may have a stronger relationship to additional factors beyond what previous researchers have examined (e.g., employment status, marital relationship quality; Lampman & Dowling-Guyer, 1995; Koropeckyj-Cox et al., 2015), such as stereotypical gender roles, knowledge of child development, or family traditions and expectations. It should be noted that the summative assessment regarding the positive evaluations of involuntarily childless women in the current study does not mean that the felt and perceived stigma reported by individuals faced with fertility issues is invalid, but it does suggest that their beliefs may not be based on accurate reflections of how people view them. There are therapeutic advantages to this in that these findings can be shared with involuntarily childless women who are concerned about how they might be perceived by others. Further investigation of the relationship between felt/perceived and enacted stigma towards involuntarily childless individuals would be beneficial.

6.1 Study Strengths, Limitations, and Future Directions

This line of research possesses a number of strengths, including the fact that it was one of the first (if not the first) theoretical investigation of stigma and stereotyping related to involuntary childlessness, the first to apply the SCM to this subject matter, and the first complete application of the AAA model with this subject matter (expanding on Kopper and Smith, 2001). In addition, the experimental design of Study 3 and 4 as well as the use of a Canadian-based sample strengthened the overall internal and external validity of the project. As with all research endeavours, though, there are limitations to note for the current project. The specific limitations fall under five main categories: 1) differing modes of stigma and stereotyping; 2) sex/gender bias due to the project focus; 3) research methods and methodology; 4) theoretical models chosen; and, 5) the lack of intervention focus of the project.

6.1.1 Differing modes of stigma and stereotyping. The current project asked participants to consider women unknown to them. However, the internalized/self-stigma and perceived/felt stigma reported by many involuntarily childless women may be more strongly related to media representations of the womanhood-motherhood social norm or even the enacted stigma stemming from close family, relatives, and communities. For example, in an investigation of the framing of infertility in Canadian print news, Sangster and Lawson (2014) found that a large majority of articles portrayed infertility as a highly alarming woman's issue. Additionally, involuntarily childless individuals have reported receiving unwanted comments and pressure to

have biological children specifically from close family members or relatives (Greil et al., 2010; Eftekhar-Ardabilly et al., 2011; Bell, 2012; Walsh, 2012; Koert & Daniluk, 2017). As such, further understanding of the stigma and stereotyping of involuntarily childless individuals may require additional examination of media portrayals of childlessness as well as the attitudes and behaviour of close, significant others towards childless women.

6.1.2 Sex/gender bias of the project. The decision to focus on women's experiences of childlessness for the current research endeavour is based on several social realities and practicalities. Despite the fact that more women are entering the workforce and more men are becoming involved with childcare, women are still largely expected to become mothers and be the primary caregiver (Slaughter, 2015); the identity and social status of women remains closely tied to childbearing and motherhood (Parry, 2005; Clarke et al., 2006; Fisher & Hammarberg, 2012), whereby motherhood, womanhood, and femininity are inextricably entwined (Friedman & Weissbrod, 2005; Blyth et al., 2008; Greil et al., 2011). Additionally, because conception plays out through women's bodies, the issue of biological childlessness is embodied primarily through women, which is echoed in the limited ART techniques that are currently available and are largely designed to be used on women regardless of the etiology of reproductive issues (e.g., lack of suitable partner; natural fertility decline due to delayed childbearing; male-factor infertility stemming from low sperm count; female-factor infertility stemming from poor egg quality; Greil, 1991; Throsby & Gill, 2004; Wang & Sauer, 2006; Greil et al., 2010; Bell, 2013).

Overall, there is an abundance of literature which focuses solely on the female/woman's experience of childlessness (e.g., Fisher & Hammarberg, 2012; Joja et al., 2015) and presumes that parenthood is more important and childlessness more stigmatizing for women compared to men (e.g., Nauck, 2007; Nauck & Klaus, 2007; Greil, Leitko, & Porter, 1988; Blackstone & Stewart, 2012; Bell, 2013; Huppelschoten et al., 2013; Peloquin & Brassard, 2013; Wischmann, 2013; Shapiro, 2014). However, it has been suggested that the difference in the experience of childlessness between men and women is not as large as some of the literature suggests (Wischmann, 2013; Wischmann & Thorn, 2013) and our overall understanding of the psychosocial consequences and experiences of male childlessness is low (Fisher & Hammarberg, 2012; Rijken & Merz, 2014; Joja et al., 2015; Arya & Dibb, 2016; Hammarberg et al., 2017; Bennett & de Kok, 2017). Outdated gender stereotypes and emotional expression differences have been cited as potential influences on research findings comparing childless men and

women. For example, Martin and Doka (2000) proposed that men are taught and prefer to adopt an instrumental grieving style (i.e., using problem-solving strategies), while women tend to adopt an intuitive grieving style (i.e., expressing feelings). Men are also less likely to disclose their infertile status or discuss their childless fate (Dooley et al., 2011; Wischmann & Thorn, 2013). Worldwide, fatherhood is also considered a marker of manhood/virility and evidence of adulthood or maturity (Veevers, 1973; Rubinstein, 1987; May, 1995, p. 136; Dykstra & Hagestad, 2007; Fisher et al., 2010), particularly in regions such as South Africa (Dyer, Lombard, & Van der Spuy, 2009), Muslim Middle East, and India (Dudgeon & Inhorn, 2009). Failure to become a father due to biology (i.e., infertility) can result in men being stigmatized due to their apparent lack of masculinity and lead men to blame their inability to conceive on their female partner (Greil, 1997). Public opinions of childless men appear steeped with gender stereotypes, as childless men are rated as significantly less warm than fathers, presumably because they are viewed as less hardworking and unable to obtain sufficient resources for a family (LaMastro, 2001). The role of “breadwinner” is still considered a central role and identity for many men with families (Christiansen & Palkovitz, 2001; Hatten, Vinter, & Williams, 2002; Ravanera & Beaujot, 2014). Without children, this role can become meaningless (Keizer, Dykstra, & Poortman, 2010). While socioeconomically disadvantaged men (e.g., unemployed, low-paying jobs; Parr, 2007; Keizer et al., 2010; Parr, 2010; Warren & Pals, 2013; Berrington, 2017) and those who do not find a suitable partner (Parr, 2007; Warren & Pals, 2013; Ravanera & Beaujot, 2014) are more likely to experience childlessness, the desire to be without children (whether by choice or circumstance) is low among men (Fisher et al., 2010; Ravanera & Beaujot, 2014; Hammarberg et al., 2017). Focusing only on the female experience of childlessness can obscure both the issue of male childlessness and the dyadic processes involved in decisions regarding parenthood. As such, requests for more nuanced and unbiased examinations of the male experience of childlessness as well as public perceptions and stigma surrounding it have been presented by myriad researchers (e.g., Fisher, Baker, & Hammarberg, 2010; Keizer et al., 2010; Keylor & Apfel, 2010; Tocchioni, 2018).

6.1.3 Research methods and methodological decisions. Designing a research project involves making a variety of decisions at each step, often without certainty that the choices made are necessarily “best” or “will work out”. Throughout the current project, past research and best practices were consulted to help inform decisions related to the study methods and methodology

employed, but some concessions were made. Recruiting student samples in Study 1 to 3 is one such concession as this practice can limit external validity and the ability to make statements about overall attitudes towards individuals who are involuntarily childless. Like many research projects, the decision to use undergraduate participants was in large part due to convenience. The use of student samples to examine stereotypes and stigma related to childlessness can pose some problems. For example, students tend to normalize delayed childbearing or temporary childlessness (behaviours which can lead to unintentionally childlessness) and are also likely to assume hypothetical voluntarily childless couples described in vignettes will eventually change their minds (suggesting normalization of parenthood; McCutcheon, 2018). As previously noted, student samples also tend to hold more liberal attitudes on issues such as reproductive rights and sexual orientation (Lottes & Kuriloff, 1994; Dey, 1996; Lambert, Ventura, Hall, & Cluse-Tolar, 2006), are more likely to identify as feminist (Aronson, 2003; McCabe, 2005), and are more likely to remain childfree (Biddlecom & Martin, 2006; Kneale & Joshi, 2008). However, there were some benefits to recruiting students for the first three studies. Chief among these benefits is that the research design was refined prior to recruitment of a Canada-wide sample. Additionally, understanding the attitudes of students is important as these individuals are beginning to make decisions related to their reproductive lives and are relatively new to the realm of tax-paying and voting, both of which have public-policy implications (i.e., individuals may vote for representatives based on how the candidate reproductive technology platforms align with their personal attitudes). Further, the students revealed greater nuances and held relatively more negative perceptions of the various women compared to the general Canadian sample who were more inclined to consider the groups of women as part of the “in-group”.

Another study design element that could potentially be met with scrutiny is the choice to implement vignettes in Studies 3 and 4. The majority of the research on attitudes towards childless individuals has employed a vignette approach (e.g., Polit, 1978; Calhoun & Selby, 1980; Mueller & Yoder, 1997; LaMastro, 2001; Koropeckyj-Cox et al., 2007; Copur & Koropeckyj-Cox, 2010), many of which manipulated similar variables (e.g., parental status, sex, occupation, race, sexual orientation) including variables that were found to have little or no relationship to attitudes towards childless individuals (McCutcheon, 2018). A more general critique of vignette research relates to internal validity, and past studies on attitudes towards childless individuals have been scrutinized for not including a manipulation check to ensure that

participants encoded the manipulation (McCutcheon, 2018). As such, a manipulation check was included in the current study to address this concern. Another common critique of vignettes is that they are artificially created scenarios which offer limited external validity (McCutcheon, 2018). In addition to consulting past literature (Cuddy et al., 2004) and recommendations for vignette design and construction in social research (Hughes & Huby, 2004; Aguinas & Bradley, 2014), pilot testing was undertaken on the vignettes used in Studies 4 and 5 to ensure they met the needs of the current research. However as previously noted, the study results suggest that the context provided in the vignettes may have resulted in “Kate” appearing “too likable”. Even the use of the name “Kate” for the woman in the vignette may have affected the results because some names can evoke more positive attitudes toward the person (Erwin, 2006; Conway & Bethune, 2015). Future vignette research in this area would benefit from refining and further testing vignettes describing childless individuals.

Finally, the post-positivist epistemology and methodology applied to the overall project is potentially limiting as I have worked solely with information related to empirical regularities in responses (i.e., means) and sought to generalize to the wider population from my samples (i.e., engaged in enumerative induction) (Chirkov, 2016). However, this approach was beneficial in that it allowed me to test my research questions and generate new ideas about the stereotyping of involuntary childlessness. It also provided the chance to test two theoretical models, which addressed some of the criticisms of this area of literature which has traditionally been atheoretical (McCutcheon, 2018). However, adopting a post-positivist paradigm and employing questionnaires did not allow me to account for experiences which fall outside of the sample averages as well as uncover potential underlying mechanisms (Chirkov, 2016). Future research stemming from this project may benefit from adopting a social constructionism or realist epistemology, with the former accounting for varying versions of human experience and meaning (Crotty, 1998) and the latter providing an opportunity to discover underlying mechanisms for phenomena (Chirkov, 2016). Others have noted the potential need for more qualitative research on attitudes towards childless individuals as employing methods such as interviews can inform our understanding of why individuals hold attitudes or how they manifest in the real-world (McCutcheon, 2018).

6.1.4 Theoretical models chosen. In general, theories allow us to better understand issues and develop informed research and intervention strategies (Deacon, 2006). To my

knowledge, there has only been one published theory-driven study examining stereotyping related to involuntarily childless individuals (Kopper & Smith, 2001). Requests for more theory-driven research around childlessness have been made (e.g., McCutcheon, 2018). Pronatalist theories such as the motherhood mandate (Russo, 1976, 1979) and the institution of motherhood (Rich, 1976) have been suggested as potential models by which to examine attitudes towards childless women (McCutcheon, 2018). Because I was interested in addressing issues related to stigma, stereotyping, and helping behaviour, the SCM and AAA model were more applicable to my overall research questions and hypotheses. Ample evidence suggests that the SCM is an appropriate theoretical model for exploring stereotypes in general, and there is also some preliminary evidence that it is useful for examining social censure and sanctioning (e.g., Cuddy et al., 2007). For the current study, Weiner's AAA model was an appropriate complimentary theory to the SCM as it allowed for examination of the relationships between attributions, affective reactions, and subsequent social censure and sanctioning associated with perceptions about childless individuals (Weiner, 1980). Despite their utility, there are potential shortcomings to consider for both theories.

One potential shortcoming of both the SCM and AAA model is that they are designed to examine the judgements applied to groups but say nothing regarding the qualities or personality characteristics of those who are more likely to negatively evaluate those groups. McCutcheon (2018) put forth a list of potential correlates for discriminatory attitudes towards childless individuals which could be further examined, including egalitarian gender beliefs (Koropecykj-Cox & Pendell, 2007), religious fundamentalism (Kirkpatrick, 1993), social dominance orientation (Pratto, Sidanius, Stallworth, & Malle, 1994), implicit discriminatory associations (Oswald, Mitchell, Blanton, Jaccard, & Tetlock, 2013), right wing authoritarianism (Altemeyer, 1996), and intergroup contact theory (Allport, 1954). The SCM and AAA model are also not designed to examine the experience of stigmatized groups (i.e., felt stigma). Further, neither the SCM nor AAA model can predict actual support or helping behaviour. A prime model for predicting and explaining intentional behaviour is the theory of planned behaviour (TPB; Ajzen, 1991; Fishbein & Ajzen, 2010). While the TPB has been used to examine issues such as parenting (Ajzen & Klobas, 2013; Graham, Smith, & Shield, 2015; Kranz, Busch, & Niepel, 2018) and delayed childbearing intentions (Williamson & Lawson, 2015; Kearney & White, 2016), to my knowledge it has not yet been applied to intentions of helping childless individuals.

Future studies may benefit from applying the TPB to examine social sanctioning against childless individuals.

In addition, while there is some evidence for the general principles of stereotyping hypothesized by the SCM to hold across a wide variety of groups and perceivers (Cuddy et al., 2009), whether this is the case for stereotyping of involuntarily childless individuals in other regions of the world is not yet understood as this was the first known project to adopt this theory. While the SCM proposes potentially universal principles of stereotyping (e.g., warmth and competence as dimensions; Cuddy et al., 2009), the stigma of childlessness has been shown to be particularly profound in some regions (Van Balen & Inhorn, 2001). As such, application of this theory across socially/culturally different samples may yield varying results.

6.1.5 Lacking focus on intervention. Failure to discuss evidence that women without children are targets of negative evaluations within the context of practical applications has been cited as a major shortcoming of existing research (McCutcheon, 2018). Future research may benefit from informing and developing interventions to target negative stereotyping of involuntarily childless individuals. In an experiment, Gawronski, Deutsch, Mbirkou, Seibt, and Strack (2008) provided extensive affirmation of counter-stereotypes training to participants and found that this led to a reduction in both the activation of stereotypes and negative evaluations. There are several cognitive biases and errors found to be associated with stereotyping which could potentially be targeted, including reliance on availability heuristics (Nisbett & Ross, 1980), underuse of base rates (i.e., prior probabilities; Kahneman & Tversky, 1973), basing judgements on observations drawn from biases or non-representative samples (Hamil, Wilson, & Nisbett, 1979), and confirmatory/hindsight bias (Nisbett & Ross, 1980). Additional approaches which have been applied to reducing prejudice more generally include perspective taking (Esses & Dovidio, 2002), learning about groups (Locksley, Borgida, Brekke, & Hepburn, 1980; Postmes & Spears, 2002), training in statistical reasoning (Schaller, Asp, Rosell, & Heim, 1996), the contact hypothesis (Allport, 1954), and decategorization (Brewer & Miller, 1984).

6.2 Conclusion

This research was designed to assess the utility of applying the SCM and AAA model as theoretical frameworks for determining the social stereotypes and subsequent sanctioning surrounding involuntarily childless women, and the overall findings suggest that these models are effective for examining this subject matter. Results also suggest that the stereotypes

associated with and sanctioning enacted on these women are not inherently negative as past research has suggested (which can be reassuring) and are largely dependent on whether the women are perceived as personally responsible for and in control of their fertility status.

The importance of this current research centers around the increasing rates of various forms of childlessness, chiefly involuntary which includes infertile individuals, and the distress that can arise from the experience. There are many reasons why more people are either delaying or unable to have biological children, including the need to prioritize other life goals (e.g., career, financial stability, etc.), but many women are making these decisions without necessarily understanding the potential impact this might have on their ability to procreate. In general, knowledge levels on reproduction and fertility are quite low. As such, assumptions that an involuntarily childless woman is “to blame” or “responsible” for her fertility issues are not entirely accurate. Increasing knowledge on reproduction and fertility, including the age-related decline in fertility and limits to ART in overcoming fertility issues, via public campaigns, education curricula, or interventions may assist people in avoiding involuntary childlessness or even help the general public understand that many pathways to involuntary childlessness are often uncontrollable. Challenging social norms around the prioritization of biological children may also decrease the distress, stigma, and stereotyping associated with involuntary childlessness, especially if people begin to see value in alternative pathways to parenthood. More research is required to examine this idea.

Current social norms around having biological children and the potential for negative stereotyping and stigmatization of childlessness can also pressure women to have biological children at whatever cost. At the current time though, the expense and lack of public funding for ART limits the overall accessibility of this option for overcoming fertility issues. This initial assessment of people’s willingness to support access to ART has potential implications for Canadian healthcare policies as the findings from this research suggest that there may be low support for the inclusion of fertility treatments in Canada’s universal healthcare system if it accompanies an increase in personal income taxes. Additional research on support for publicly funded ART would be beneficial, especially if more individuals require access.

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Appendix A: Study 1 Advertisements

Participant Pool Advertisement

Study Title: Attitudes towards Social Groupings of Women

Researchers: Linzi Williamson (linzi.williamson@usask.ca) is an Applied Social Psychology PhD student who is supervised by Dr. Karen Lawson (karen.lawson@usask.ca; 306-966-2524), Department of Psychology, University of Saskatchewan.

This is a research study designed to examine attitudes associated with different social categories of women. If you would like to participate, you will be asked to complete a 20-minute online survey.

In exchange for participating you will receive 1 credit towards your introductory Psychology grade.

This study was approved by the University of Saskatchewan Research Ethics Board on March 2, 2016 (Beh-REB 16-45).

<https://fluidsurveys.usask.ca/s/attitudetowardswomen/>

PAWS Advertisement

Study Title: Attitudes towards Social Groupings of Women

Researchers: Linzi Williamson (linzi.williamson@usask.ca) is an Applied Social Psychology PhD student who is supervised by Dr. Karen Lawson (karen.lawson@usask.ca; 306-966-2524), Department of Psychology, University of Saskatchewan.

This is a research study designed to examine attitudes associated with different social categories of women. If you would like to participate, please click on the following link (or copy and paste the link into a web browser): <https://fluidsurveys.usask.ca/s/PAWSattitudetowardswomen/>

This study was approved by the University of Saskatchewan Research Ethics Board on March 2, 2016 (Beh-REB 16-45).

Appendix B: Study 1 Consent Forms

Psychology Participant Pool Consent Form Attitudes towards Social Groupings of Women

You are invited to participate in a research study entitled *Attitudes towards Social Groupings of Women*. Please read this form carefully, and feel free to ask any questions you might have about the study by contacting the researchers using the information below. Please print off a copy of this form for your records.

Student-Researcher: Linzi Williamson, Department of Psychology, 306-966-6159, linzi.williamson@usask.ca.

Supervisor: Karen Lawson, Department of Psychology, 306-966-2524, karen.lawson@usask.ca.

Purpose and Procedure: The proposed study is designed to examine the following research question: What attitudes are held towards different categories of women? The information gathered from this preliminary investigation will then lead to the development of future studies examining this issue further. If you decide to participate, you will be asked to complete a 20-minute online survey examining attitudes associated with different categories of women. Please feel free to leave unanswered any questions that make you feel uncomfortable.

Risks: There are no known risks associated with participation in this study. Furthermore, you may receive no personal benefits from participation in the study. At the end of the study you will be given a sheet that better explains the nature of the study. You may print off this form for your records and you may contact the researchers by email should you have any questions or concerns.

Compensation: If you decide to participate, you will be awarded 1 credit towards your Introductory Psychology bonus marks for research study participation. Your NSID cannot be linked to your survey data; we will only know what you have participated by reviewing who has accessed the link through the Introductory Psychology Participant Pool.

Confidentiality: Your information is completely anonymous, and we will not ask you for any identifying information. Your responses will only be used as part of a larger dataset. All of the data from the survey will be securely stored for five years and then it will be destroyed beyond recovery through the use of Eraser, a free file eraser program that overwrites the deleted files on personal computers/laptops and portable media. Eraser is an advanced security tool for Windows which allows individuals to completely remove sensitive data from their hard drive by overwriting it several times with carefully selected patterns. The data collected for this study may be published in an academic journal and/or presented at a professional conference. This survey will be hosted by Fluid Survey, a company located in the USA and subject to US laws and whose servers are located outside of Canada. The privacy of the information you provide is subject to the laws of those other jurisdictions. By participating in this survey you acknowledge and agree that your answers/information will be stored and accessed outside of Canada and may or may not receive the same level of privacy protection.

Right to withdraw: You may withdraw from the study for any reason, at any time prior to submitting the data, without penalty of any sort and/or without loss of a research credit. If you wish to withdraw from the study simply close your web-browser without submitting your data. However, due to the anonymous

nature of the database, you will not be able to withdraw after you have submitted your data because of the inability to identify the data of any specific individual.

Questions: If you have any questions concerning the study, please feel free to ask at any point by contacting the researchers by email. You are also free to contact the researchers at the numbers provided above if you have questions at a later time. This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board (Beh-REB 16-45). Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office (ethics.office@usask.ca (306) 966-2975; toll free 1 (888) 966-2975). You may obtain a copy of the results of the study by contacting the student-researcher or supervisor. At the end of our study (April 2017), we will make a summary of the results available on our reproductive psychology research team website: www.reproductivopsy.usask.ca.

Consent to Participate: I have read and understand the description of the research study provided above. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I agree to participate in the study described above, understanding that I may withdraw my consent to participate at any time prior to submitting my data. PLEASE PRINT OFF A COPY OF THIS PAGE FOR YOUR RECORDS. YOU MAY ALSO EMAIL THE RESEARCHERS TO OBTAIN A COPY OF THIS PAGE (linzi.williamson@usask.ca; karen.lawson@usask.ca).

- YES (Participants will be directed to study)
- No (Participants will be directed to end of study)

PAWS Consent Form

Attitudes towards Social Groupings of Women

You are invited to participate in a research study entitled *Attitudes towards Social Groupings of Women*. Please read this form carefully, and feel free to ask any questions you might have about the study by contacting the researchers using the information below. Please print off a copy of this form for your records.

Student-Researcher: Linzi Williamson, Department of Psychology, 306-966-6159, linzi.williamson@usask.ca.

Supervisor: Karen Lawson, Department of Psychology, 306-966-2524, karen.lawson@usask.ca.

Purpose and Procedure: The proposed study is designed to examine the following research question: How are different categories of women viewed by society? The information gathered from this preliminary investigation will then lead to the development of future studies examining this issue further. If you decide to participate, you will be asked to complete a 20-minute online survey examining characteristics associated with different categories of women. Please feel free to leave unanswered any questions that make you feel uncomfortable.

Risks: There are no known risks associated with participation in this study. Furthermore, you may receive no personal benefits from participation in the study. At the end of the study you will be given a sheet that better explains the nature of the study. You may print off this form for your records and you may contact the researchers by email should you have any questions or concerns.

Compensation: You will not receive any official compensation for completing this survey. However, we hope that you will enjoy providing your opinions and contributing to the advancement of research knowledge.

Confidentiality: Your information is completely anonymous, and we will not ask you for any identifying information. Your responses will only be used as part of a larger dataset. All of the data from the survey will be securely stored for five years and then it will be destroyed beyond recovery through the use of Eraser, a free file eraser program that overwrites the deleted files on personal computers/laptops and portable media. Eraser is an advanced security tool for Windows which allows individuals to completely remove sensitive data from their hard drive by overwriting it several times with carefully selected patterns. The data collected for this study may be published in an academic journal and/or presented at a professional conference. This survey will be hosted by Fluid Survey, a company located in the USA and subject to US laws and whose servers are located outside of Canada. The privacy of the information you provide is subject to the laws of those other jurisdictions. By participating in this survey you acknowledge and agree that your answers/information will be stored and accessed outside of Canada and may or may not receive the same level of privacy protection.

Right to withdraw: You may withdraw from the study for any reason, at any time prior to submitting the data, without penalty of any sort. If you wish to withdraw from the study simply close your web-browser without submitting your data. However, due to the anonymous nature of the database, you will not be able to withdraw after you have submitted your data because of the inability to identify the data of any specific individual.

Questions: If you have any questions concerning the study, please feel free to ask at any point by contacting the researchers by email. You are also free to contact the researchers at the numbers provided above if you have questions at a later time. This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board (Beh-REB 16-45). Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office (ethics.office@usask.ca (306) 966-2975; toll free 1 (888) 966-2975). You may obtain a copy of the results of the study by contacting the student-researcher or supervisor. At the end of our study (April 2017), we will make a summary of the results available on our reproductive psychology research team website: www.reproductivepsy.usask.ca.

Consent to Participate: I have read and understand the description of the research study provided above. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I agree to participate in the study described above, understanding that I may withdraw my consent to participate at any time prior to submitting my data. PLEASE PRINT OFF A COPY OF THIS PAGE FOR YOUR RECORDS. YOU MAY ALSO EMAIL THE RESEARCHERS TO OBTAIN A COPY OF THIS PAGE (linzi.williamson@usask.ca; karen.lawson@usask.ca).

- YES (Participants will be directed to study)
- No (Participants will be directed to end of study)

Appendix C: Study 1 Online Questionnaire

Please take a moment to consider the group 35 YEAR OLD WOMEN WHO HAVE DELAYED CHILDBEARING. Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that 35 YEAR OLD WOMEN WHO HAVE DELAYED CHILDBEARING make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group WOMEN WHO ARE UNABLE TO HAVE CHILDREN DUE TO AN UNTREATED SEXUALLY TRANSMITTED INFECTION. Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that WOMEN WHO ARE UNABLE TO HAVE CHILDREN DUE TO AN UNTREATED SEXUALLY TRANSMITTED INFECTION make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group WOMEN WHO ARE UNABLE TO HAVE CHILDREN DUE TO A SERIOUS ILLNESS THAT LEFT THEM INFERTILE. Please answer the following questions with respect to how you think most people in Canadian society view these women

1 Not	2	3	4	5
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	at all				Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that WOMEN WHO ARE UNABLE TO HAVE CHILDREN DUE TO A SERIOUS ILLNESS THAT LEFT THEM INFERTILE make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group LESBIANS. Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that LESBIANS make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group WOMEN WHO ARE SINGLE (NOT IN A COMMITTED RELATIONSHIP). Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that WOMEN WHO ARE SINGLE (NOT IN A COMMITTED RELATIONSHIP) make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group VOLUNTARILY CHILDLESS WOMEN (DO NOT HAVE AND DO NOT WANT CHILDREN). Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that VOLUNTARILY CHILDLESS WOMEN (DO NOT HAVE AND DO NOT WANT CHILDREN) make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group STAY AT HOME MOTHERS (HOMEMAKERS). Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that STAY AT HOME MOTHERS (HOMEMAKERS) make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group PROFESSIONAL/CAREER MOTHERS (WOMEN WHO ARE BOTH MOTHERS AND MAINTAIN A HIGH PROFILE JOB OUTSIDE OF THE HOME). Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that PROFESSIONAL/CAREER MOTHERS (WOMEN WHO ARE BOTH MOTHERS AND MAINTAIN A HIGH PROFILE JOB OUTSIDE OF THE HOME) make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group TEEN MOTHERS. Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that TEEN MOTHERS make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group RICH/WEALTHY WOMEN. Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

things more difficult for most other Canadians.

Resources that go to this group are likely to take away from the resources of most other Canadians. ☐ ☐ ☐ ☐ ☐

To what extent do you think that RICH/WEALTHY WOMEN make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group WOMEN WHO ARE HOMELESS. Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that WOMEN WHO ARE HOMELESS make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group WOMEN WHO ARE PHYSICALLY DISABLED. Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that WOMEN WHO ARE PHYSICALLY DISABLED make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group RELIGIOUS WOMEN. Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that RELIGIOUS WOMEN make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group WOMEN WHO ARE WELFARE RECIPIENTS. Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If members of this group get special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this group are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that WOMEN WHO ARE WELFARE RECIPIENTS make most people in Canadian society feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please take a moment to consider the group ELDERLY WOMEN. Please answer the following questions with respect to how you think most people in Canadian society view these women

	1 Not at all	2	3	4	5 Extremely
How confident are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent are members of this group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- How sincere are members of this group? ☐ ☐ ☐ ☐ ☐
- How warm are members of this group? ☐ ☐ ☐ ☐ ☐
- How well-educated are members of this group? ☐ ☐ ☐ ☐ ☐
- How economically successful are members of this group? ☐ ☐ ☐ ☐ ☐
- If members of this group get special breaks, this is likely to make things more difficult for most other Canadians. ☐ ☐ ☐ ☐ ☐
- Resources that go to this group are likely to take away from the resources of most other Canadians. ☐ ☐ ☐ ☐ ☐

To what extent do you think that ELDERLY WOMEN make most people in Canadian society feel:

- | | 1 Not at all | 2 | 3 | 4 | 5 Extremely |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Proud | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Inspired | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Angry | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Resentful | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Envious | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Jealous | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Pity | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sympathy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

What is your age? Please indicate in years (e.g., 25)

Are you:

- ☐ Male
- ☐ Female
- ☐ Other
- ☐ Prefer not to disclose

Were you born in Canada?

- ☐ Yes
- ☐ No (if not, in what country were you born?) _____

Do you identify as Canadian?

- ☐ Yes
- ☐ No

Please indicate your ethnicity (i.e. peoples' ethnicity describes their feeling of belonging and attachment to a distinct group of a larger population that shares their ancestry, colour, language or religion):

- ☐ White or Euro-Canadian
- ☐ Latino or Hispanic
- ☐ Middle Eastern or Arab-Canadian
- ☐ Black, Afro-Caribbean, or African-Canadian
- ☐ South Asian
- ☐ East Asian
- ☐ First Nations
- ☐ Métis
- ☐ Inuit
- ☐ If none of these represent the group with which you identify, please specify

What is your current relationship status? (please choose one)

- ☐ Single (not in a committed relationship)
- ☐ Dating casually
- ☐ Committed relationship
- ☐ Married
- ☐ Separated
- ☐ Divorced
- ☐ Widowed
- ☐ Cohabiting
- ☐ Other (please specify) _____

What is the highest grade or year of school that you have completed? (please choose one)

- ☐ High school
- ☐ Bachelor's degree (undergraduate)

- ☐ Currently in undergraduate program
- ☐ Master's degree (graduate)
- ☐ Currently in Master's graduate program
- ☐ PhD degree
- ☐ Currently in PhD program
- ☐ Certificate program
- ☐ Technical diploma
- ☐ No formal schooling
- ☐ Other (please specify) _____

What is the highest grade or year of school that your parents/guardians have completed? (please choose one - if they differ for each parent/guardian, choose the highest level among the two)

- ☐ High school
- ☐ Bachelor's degree (undergraduate)
- ☐ Currently in undergraduate program
- ☐ Master's degree (graduate)
- ☐ Currently in Master's graduate program
- ☐ PhD degree
- ☐ Currently in PhD program
- ☐ Certificate program
- ☐ Technical diploma
- ☐ No formal schooling
- ☐ Other (please specify) _____

Do you currently have children?

- ☐ Yes (if so, how many?) _____
- ☐ No

If you do not currently have children, do you intend on having any in the future?

- ☐ Yes
- ☐ No

Appendix D: Study 1 Debriefing Form

Attitudes towards Social Groupings of Women

Thank you for your participation in this study! Your participation is sincerely appreciated, and we hope that you have found your experience to be interesting. As noted in the consent form provided at the start, this study is designed to be a preliminary investigation examining the following research question: What stereotypes are imposed on different categories of women? Specifically, this preliminary investigation will allow us to test the measures of the stereotype content model (SCM; Fiske et al., 2002). This model distinguishes among stereotyped groups along two dimensions: competence and warmth. This distinction results in four combinations or groupings based on the amount of warmth or competence attributed (i.e., paternalistic, admiration, contemptuous, envious). The information gathered from this preliminary investigation will then lead to the development of future studies examining this issue further.

The overall purpose of the larger research project is to examine how involuntarily childless women are perceived by the general public and to explore the stigmatization and stereotyping surrounding these individuals. A significant amount of research has examined the felt and perceived stigma reported by involuntarily childless individuals (e.g., Baker, 2003; Bell, 2012a; Calhoun & Selby, 1983; Kopper & Smith, 2001; Lampman & Dowling-Guyer, 1995; Walsh, 2012). However, examinations of public and enacted stigma related to involuntary childlessness at the community level (i.e., cultural values, social norms) have received considerably less attention, as was addressed earlier. Women will be the focus of this investigation because involuntary childlessness is largely viewed as a “woman’s problem” (Behboodi-Moghadam et al., 2013; WHO, 2012), and women more often carry the blame for a couples’ inability to conceive over men, are more likely to experience higher levels of childless-related stigma than men (Slade et al., 2007), and are more likely to undergo ART procedures than men as the majority of the technology is designed to be used on women (Wang & Sauer, 2006).

The main research questions for the current project are as follows: What are the dominant societal perceptions of different categories of involuntarily childless women (i.e., infertile women, lesbian women, single women, etc.)?; What are the differential perceptions of each category (i.e., stereotypes)?; Is there more or less stigma associated with each category?; What are the affective reactions to each category?; and finally, what are the potential behavioural consequences associated with each category?

The results of this study will be posted on our reproductive psychology research team website (www.reproductivepsy.usask.ca) at the end of the study (April 2017). You may also choose to contact the researchers by email for a summary of the results.

Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office ethics.office@usask.ca (306) 966-2975. Out of town participants may call toll free (888) 966-2975.

Researchers: Linzi Williamson (linzi.williamson@usask.ca; 306-966-6159), Applied Social Psychology PhD student, supervised by Dr. Karen Lawson (karen.lawson@usask.ca; 306-966-2524), Department of Psychology, University of Saskatchewan.

Appendix E: Study 2 Advertisements

Participant Pool Advertisement

Study Title: Attitudes towards Social Groupings of Women

Researchers: Linzi Williamson (linzi.williamson@usask.ca) is an Applied Social Psychology PhD student who is supervised by Dr. Karen Lawson (karen.lawson@usask.ca; 306-966-2524), Department of Psychology, University of Saskatchewan.

This is a research study designed to examine attitudes associated with different social categories of women. If you would like to participate, you will be asked to complete a 20-minute online survey.

In exchange for participating you will receive 1 credit towards your introductory Psychology grade.

This study was approved by the University of Saskatchewan Research Ethics Board on March 2, 2016 (Beh-REB 16-294).

<https://fluidsurveys.usask.ca/surveys/linziwilliamson/attitudes-towards-women-2-participant-pool/>

PAWS Advertisement

Study Title: Attitudes towards Social Groupings of Women

Researchers: Linzi Williamson (linzi.williamson@usask.ca) is an Applied Social Psychology PhD student who is supervised by Dr. Karen Lawson (karen.lawson@usask.ca; 306-966-2524), Department of Psychology, University of Saskatchewan.

This is a research study designed to examine attitudes associated with different social categories of women. If you would like to participate, please click on the following link (or copy and paste the link into a web browser): <https://fluidsurveys.usask.ca/surveys/linziwilliamson/attitudes-towards-women-2-paws-1/>

This study was approved by the University of Saskatchewan Research Ethics Board on March 2, 2016 (Beh-REB 16-294).

Appendix F: Study 2 Consent Forms

Psychology Participant Pool Consent Form

Attitudes towards Social Groupings of Women

You are invited to participate in a research study entitled *Attitudes towards Social Groupings of Women*. Please read this form carefully, and feel free to ask any questions you might have about the study by contacting the researchers using the information below. Please print off a copy of this form for your records.

Student-Researcher: Linzi Williamson, Department of Psychology, 306-966-6159, linzi.williamson@usask.ca.

Supervisor: Karen Lawson, Department of Psychology, 306-966-2524, karen.lawson@usask.ca.

Purpose and Procedure: The study is designed to examine the following research questions: What attitudes are held towards different categories of women?; What attributions are made about different categories of women?; and, What social consequences do these women subsequently endure? The information gathered from this investigation will then lead to the development of future studies examining this issue further. If you decide to participate, you will be asked to complete a 20-minute online survey examining attitudes associated with different categories of women. Please feel free to leave unanswered any questions that make you feel uncomfortable.

Risks: There are no known risks associated with participation in this study. Furthermore, you may receive no personal benefits from participation in the study. At the end of the study you will be given a sheet that better explains the nature of the study. You may print off this form for your records and you may contact the researchers by email should you have any questions or concerns.

Compensation: If you decide to participate, you will be awarded 1 credit towards your Introductory Psychology bonus marks for research study participation. Your NSID cannot be linked to your survey data; we will only know what you have participated by reviewing who has accessed the link through the Introductory Psychology Participant Pool.

Confidentiality: Your information is completely anonymous, and we will not ask you for any identifying information. Your responses will only be used as part of a larger dataset. All of the data from the survey will be securely stored for five years and then it will be destroyed beyond recovery through the use of Eraser, a free file eraser program that overwrites the deleted files on personal computers/laptops and portable media. Eraser is an advanced security tool for Windows which allows individuals to completely remove sensitive data from their hard drive by overwriting it several times with carefully selected patterns. The data collected for this study may be published in an academic journal and/or presented at a professional conference. This survey will be hosted by Fluid Survey, a company located in the USA and subject to US laws and whose servers are located outside of Canada. The privacy of the information you provide is subject to the laws of those other jurisdictions. By participating in this survey you acknowledge and agree that your answers/information will be stored and accessed outside of Canada and may or may not receive the same level of privacy protection.

Right to withdraw: You may withdraw from the study for any reason, at any time prior to submitting the data, without penalty of any sort and/or without loss of a research credit. If you wish to withdraw from the

study simply close your web-browser without submitting your data. However, due to the anonymous nature of the database, you will not be able to withdraw after you have submitted your data because of the inability to identify the data of any specific individual.

Questions: If you have any questions concerning the study, please feel free to ask at any point by contacting the researchers by email. You are also free to contact the researchers at the numbers provided above if you have questions at a later time. This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board (Beh-REB 16-294). Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office (ethics.office@usask.ca (306) 966-2975; toll free 1 (888) 966-2975). You may obtain a copy of the results of the study by contacting the student-researcher or supervisor. At the end of our study (April 2017), we will make a summary of the results available on our reproductive psychology research team website: www.reproductivepsy.usask.ca.

Consent to Participate: I have read and understand the description of the research study provided above. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I agree to participate in the study described above, understanding that I may withdraw my consent to participate at any time prior to submitting my data. PLEASE PRINT OFF A COPY OF THIS PAGE FOR YOUR RECORDS. YOU MAY ALSO EMAIL THE RESEARCHERS TO OBTAIN A COPY OF THIS PAGE (linzi.williamson@usask.ca; karen.lawson@usask.ca).

- YES (Participants will be directed to study)
- No (Participants will be directed to end of study)

PAWS Consent Form

Attitudes towards Social Groupings of Women

You are invited to participate in a research study entitled *Attitudes towards Social Groupings of Women*. Please read this form carefully, and feel free to ask any questions you might have about the study by contacting the researchers using the information below. Please print off a copy of this form for your records.

Student-Researcher: Linzi Williamson, Department of Psychology, 306-966-6159, linzi.williamson@usask.ca.

Supervisor: Karen Lawson, Department of Psychology, 306-966-2524, karen.lawson@usask.ca.

Purpose and Procedure: The study is designed to examine the following research questions: What attitudes are held towards different categories of women?; What attributions are made about different categories of women?; and, What social consequences do these women subsequently endure? The information gathered from this investigation will then lead to the development of future studies examining this issue further. If you decide to participate, you will be asked to complete a 20-minute online survey examining attitudes associated with different categories of women. Please feel free to leave unanswered any questions that make you feel uncomfortable.

Risks: There are no known risks associated with participation in this study. Furthermore, you may receive no personal benefits from participation in the study. At the end of the study you will be given a sheet that better explains the nature of the study. You may print off this form for your records and you may contact the researchers by email should you have any questions or concerns.

Compensation: You will not receive any official compensation for completing this survey. However, we hope that you will enjoy providing your opinions and contributing to the advancement of research knowledge.

Confidentiality: Your information is completely anonymous, and we will not ask you for any identifying information. Your responses will only be used as part of a larger dataset. All of the data from the survey will be securely stored for five years and then it will be destroyed beyond recovery through the use of Eraser, a free file eraser program that overwrites the deleted files on personal computers/laptops and portable media. Eraser is an advanced security tool for Windows which allows individuals to completely remove sensitive data from their hard drive by overwriting it several times with carefully selected patterns. The data collected for this study may be published in an academic journal and/or presented at a professional conference. This survey will be hosted by Fluid Survey, a company located in the USA and subject to US laws and whose servers are located outside of Canada. The privacy of the information you provide is subject to the laws of those other jurisdictions. By participating in this survey you acknowledge and agree that your answers/information will be stored and accessed outside of Canada and may or may not receive the same level of privacy protection.

Right to withdraw: You may withdraw from the study for any reason, at any time prior to submitting the data, without penalty of any sort. If you wish to withdraw from the study simply close your web-browser without submitting your data. However, due to the anonymous nature of the database, you will not be able to withdraw after you have submitted your data because of the inability to identify the data of any specific individual.

Questions: If you have any questions concerning the study, please feel free to ask at any point by contacting the researchers by email. You are also free to contact the researchers at the numbers provided above if you have questions at a later time. This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board (Beh-REB 16-294). Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office (ethics.office@usask.ca (306) 966-2975; toll free 1 (888) 966-2975). You may obtain a copy of the results of the study by contacting the student-researcher or supervisor. At the end of our study (April 2017), we will make a summary of the results available on our reproductive psychology research team website: www.reproductivepsy.usask.ca.

Consent to Participate: I have read and understand the description of the research study provided above. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I agree to participate in the study described above, understanding that I may withdraw my consent to participate at any time prior to submitting my data. PLEASE PRINT OFF A COPY OF THIS PAGE FOR YOUR RECORDS. YOU MAY ALSO EMAIL THE RESEARCHERS TO OBTAIN A COPY OF THIS PAGE (linzi.williamson@usask.ca; karen.lawson@usask.ca).

- YES (Participants will be directed to study)
- No (Participants will be directed to end of study)

Appendix G: Study 2 Online Questionnaire

In this questionnaire we are going to ask you to make ratings of how you personally think about different groups of women. Please take a moment to consider how you view women in the specified target group before answering the questions associated with each group. There are no right or wrong answers, so please give your honest opinion.

Please click the button below

☐ BEGIN THE SURVEY

Please take a moment to picture in your mind a 35 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE HER FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS. Please answer the following questions with respect to how you personally view this woman.

	1 Not at all	2	3	4	5 Extremely
How confident is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent is this woman	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If this woman got special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this woman are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent does this 35 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE HER FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS make you feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this 35 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE HER FIRST CHILD AND HAVING FERTILITY PROBLEMS would be a:

	1 Not at all	2	3	4	5 Extremely
Competent mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurturing mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capable mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard-working mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loving mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this 35 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE HER FIRST CHILD AND HAVING FERTILITY PROBLEMS IS:

	1 Not at all	2	3	4	5 Extremely
Responsible for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To blame for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At fault for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personally accountable for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you agree with the following statement about the woman you pictured in your mind?: A 35 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE HER FIRST CHILD AND HAVING FERTILITY PROBLEMS should have access to medical fertility treatments (e.g., in vitro fertilization, donor insemination, hormonal therapy, etc.).

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

In your opinion, how deserving is this 35 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE HER FIRST CHILD AND HAVING FERTILITY PROBLEMS of receiving fertility treatments which are covered under Canada's universal health care net?

- ☐ Very deserving

- ☐ Deserving
- ☐ Neither deserving nor undeserving
- ☐ Undeserving
- ☐ Very undeserving

How supportive would you be of an increase in your yearly taxes to ensure that the cost of fertility treatments for this 35 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE HER FIRST CHILD AND HAVING FERTILITY PROBLEMS could be covered under Canada's universal health care net?

- ☐ Very supportive
- ☐ Supportive
- ☐ Neither supportive nor unsupportive
- ☐ Unsupportive
- ☐ Very unsupportive

If this 35 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE HER FIRST CHILD AND HAVING FERTILITY PROBLEMS was to personally raise money through online means (e.g., Go Fund Me) for medical fertility treatments, how willing would you be to donate money to her?

- ☐ Very willing
- ☐ Willing
- ☐ Neither willing nor unwilling
- ☐ Unwilling
- ☐ Very unwilling

Please take a moment to picture in your mind a WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO AN UNTREATED SEXUALLY TRANSMITTED INFECTION. Please answer the following questions with respect to how you personally view this woman.

	1	Not at all	2	3	4	5	Extremely
How confident is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How competent is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How sincere is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How warm is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How well-educated is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

How economically successful is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If this woman got special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this woman are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent does this WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO AN UNTREATED SEXUALLY TRANSMITTED INFECTION make you feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO AN UNTREATED SEXUALLY TRANSMITTED INFECTION would be a:

	1 Not at all	2	3	4	5 Extremely
Competent mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurturing mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capable mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard-working mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loving mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO AN UNTREATED SEXUALLY TRANSMITTED INFECTION is:

	1 Not at all	2	3	4	5 Extremely
Responsible for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To blame for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At fault for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Personally accountable for her fertility problems ☐ ☐ ☐ ☐ ☐

To what extent do you agree with the following statement about the woman you pictured in your mind?: **A WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO AN UNTREATED SEXUALLY TRANSMITTED INFECTION** should have access to medical fertility treatments (e.g., in vitro fertilization, donor insemination, hormonal therapy, etc.).

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

In your opinion, how deserving is this **WOMAN EXPERIENCING FERTILITY PROBLEMS DUE TO AN UNTREATED SEXUALLY TRANSMITTED INFECTION** of receiving fertility treatments which are covered under Canada's universal health care net?

- ☐ Very deserving
- ☐ Deserving
- ☐ Neither deserving nor undeserving
- ☐ Undeserving
- ☐ Very undeserving

How supportive would you be of an increase in your yearly taxes to ensure that the cost of fertility treatments for this **WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO AN UNTREATED SEXUALLY TRANSMITTED INFECTION** could be covered under Canada's universal health care net?

- ☐ Very supportive
- ☐ Supportive
- ☐ Neither supportive nor unsupportive
- ☐ Unsupportive
- ☐ Very unsupportive

If this WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO AN UNTREATED SEXUALLY TRANSMITTED INFECTION was to personally raise money through online means (e.g., Go Fund Me) for medical fertility treatments, how willing would you be to donate money to her?

- ☐ Very willing
- ☐ Willing
- ☐ Neither willing nor unwilling
- ☐ Unwilling
- ☐ Very unwilling

Please take a moment to picture in your mind a WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO A SERIOUS ILLNESS. Please answer the following questions with respect to how you personally view this woman.

	1 Not at all	2	3	4	5 Extremely
How confident is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If this woman got special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this woman are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent does this WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO A SERIOUS ILLNESS make you feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pity ☐ ☐ ☐ ☐ ☐

Sympathy ☐ ☐ ☐ ☐ ☐

To what extent do you think that this WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO A SERIOUS ILLNESS would be a:

	1	Not at all	2	3	4	5	Extremely
Competent mother	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Nurturing mother	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Capable mother	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Hard-working mother	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Loving mother	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

To what extent do you think that this WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO A SERIOUS ILLNESS is:

	1	Not at all	2	3	4	5	Extremely
Responsible for her fertility problems	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
To blame for her fertility problems	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
At fault for her fertility problems	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Personally accountable for her fertility problems	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

To what extent do you agree with the following statement about the woman you pictured in your mind?: A WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO A SERIOUS ILLNESS should have access to medical fertility treatments (e.g., in vitro fertilization, donor insemination, hormonal therapy, etc.).

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

In your opinion, how deserving is this WOMAN EXPERIENCING FERTILITY PROBLEMS DUE TO A SERIOUS ILLNESS of receiving fertility treatments which are covered under Canada's universal health care net?

- ☐ Very deserving

- ☐ Deserving
- ☐ Neither deserving nor undeserving
- ☐ Undeserving
- ☐ Very undeserving

How supportive would you be of an increase in your yearly taxes to ensure that the cost of fertility treatments for this WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO A SERIOUS ILLNESS could be covered under Canada's universal health care net?

- ☐ Very supportive
- ☐ Supportive
- ☐ Neither supportive nor unsupportive
- ☐ Unsupportive
- ☐ Very unsupportive

If this WOMAN WHO IS EXPERIENCING FERTILITY PROBLEMS DUE TO A SERIOUS ILLNESS was to personally raise money through online means (e.g., Go Fund Me) for medical fertility treatments, how willing would you be to donate money to her?

- ☐ Very willing
- ☐ Willing
- ☐ Neither willing nor unwilling
- ☐ Unwilling
- ☐ Very unwilling

Please take a moment to picture in your mind a LESBIAN WOMAN WHO IS TRYING TO CONCEIVE A CHILD. Please answer the following questions with respect to how you personally view this woman.

	1 Not at all	2	3	4	5 Extremely
How confident is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If this woman was to get special breaks, this is likely to make things more difficult for most other Canadians. ☐ ☐ ☐ ☐ ☐

Resources that go to this woman are likely to take away from the resources of most other Canadians. ☐ ☐ ☐ ☐ ☐

To what extent does this LESBIAN WOMAN WHO IS TRYING TO CONCEIVE A CHILD make you feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this LESBIAN WOMAN WHO IS TRYING TO CONCEIVE A CHILD would be a:

	1 Not at all	2	3	4	5 Extremely
Competent mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurturing mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capable mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard-working mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loving mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this LESBIAN WOMAN WHO IS TRYING TO CONCEIVE A CHILD is:

	1 Not at all	2	3	4	5 Extremely
Responsible for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To blame for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At fault for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personally accountable for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you agree with the following statement about the woman you pictured in your mind?: A LESBIAN WOMAN WHO IS TRYING TO CONCEIVE A CHILD should have access to medical fertility treatments (e.g., in vitro fertilization, donor insemination, hormonal therapy, etc.).

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

In your opinion, how deserving is this LESBIAN WOMAN WHO IS TRYING TO CONCEIVE A CHILD of receiving fertility treatments which are covered under Canada's universal health care net?

- ☐ Very deserving
- ☐ Deserving
- ☐ Neither deserving nor undeserving
- ☐ Undeserving
- ☐ Very undeserving

How supportive would you be of an increase in your yearly taxes to ensure that the cost of fertility treatments for this LESBIAN WOMAN WHO IS TRYING TO CONCEIVE A CHILD could be covered under Canada's universal health care net?

- ☐ Very supportive
- ☐ Supportive
- ☐ Neither supportive nor unsupportive
- ☐ Unsupportive
- ☐ Very unsupportive

If this LESBIAN WOMAN WHO IS TRYING TO CONCEIVE A CHILD was to personally raise money through online means (e.g., Go Fund Me) for medical fertility treatments, how willing would you be to donate money to her?

- ☐ Very willing
- ☐ Willing
- ☐ Neither willing nor unwilling
- ☐ Unwilling

☐ Very unwilling

Please take a moment to picture in your mind a WOMAN WHO IS SINGLE (NOT IN A COMMITTED RELATIONSHIP) AND TRYING TO CONCEIVE A CHILD. Please answer the following questions with respect to how you personally view this woman.

	1 Not at all	2	3	4	5 Extremely
How confident is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If this woman got special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this woman are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent does this WOMAN WHO IS SINGLE (NOT IN A COMMITTED RELATIONSHIP) AND TRYING TO CONCEIVE A CHILD make you feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this WOMAN WHO IS SINGLE (NOT IN A COMMITTED RELATIONSHIP) AND TRYING TO CONCEIVE A CHILD would be a:

	1 Not at all	2	3	4	5 Extremely
Competent mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Nurturing mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capable mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard-working mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loving mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this WOMAN WHO IS SINGLE (NOT IN A COMMITTED RELATIONSHIP) AND TRYING TO CONCEIVE A CHILD is:

	1 Not at all	2	3	4	5 Extremely
Responsible for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To blame for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At fault for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personally accountable for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you agree with the following statement about the woman you pictured in your mind?: A WOMAN WHO IS SINGLE (NOT IN A COMMITTED RELATIONSHIP) AND TRYING TO CONCEIVE A CHILD should have access to medical fertility treatments (e.g., in vitro fertilization, donor insemination, hormonal therapy, etc.).

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

In your opinion, how deserving is this WOMAN WHO IS SINGLE (NOT IN A COMMITTED RELATIONSHIP) AND TRYING TO CONCEIVE A CHILD of receiving fertility treatments which are covered under Canada's universal health care net?

- ☐ Very deserving
- ☐ Deserving
- ☐ Neither deserving nor undeserving
- ☐ Undeserving
- ☐ Very undeserving

How supportive would you be of an increase in your yearly taxes to ensure that the cost of fertility treatments for this WOMAN WHO IS SINGLE (NOT IN A COMMITTED RELATIONSHIP) AND TRYING TO CONCEIVE A CHILD could be covered under Canada's universal health care net?

- ☐ Very supportive
- ☐ Supportive
- ☐ Neither supportive nor unsupportive
- ☐ Unsupportive
- ☐ Very unsupportive

If this WOMAN WHO IS SINGLE (NOT IN A COMMITTED RELATIONSHIP) AND TRYING TO CONCEIVE A CHILD was to personally raise money through online means (e.g., Go Fund Me) for medical fertility treatments, how willing would you be to donate money to her?

- ☐ Very willing
- ☐ Willing
- ☐ Neither willing nor unwilling
- ☐ Unwilling
- ☐ Very unwilling

Please take a moment to picture in your mind a 40 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE HER FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS. Please answer the following questions with respect to how you personally view this woman.

	1	Not at all	2	3	4	5	Extremely
How confident is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How competent is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How sincere is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How warm is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How well-educated is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How economically successful is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
If this woman got special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Resources that go to this woman are likely to take away from the resources of most other Canadians.	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

To what extent does this 40 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS make you feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this 40 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS would be a:

	1 Not at all	2	3	4	5 Extremely
Competent mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurturing mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capable mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard-working mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loving mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this 40 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS is:

	1 Not at all	2	3	4	5 Extremely
Responsible for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To blame for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At fault for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personally accountable for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you agree with the following statement about the woman you pictured in your mind?: A 40 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS should have access to medical fertility treatments (e.g., in vitro fertilization, donor insemination, hormonal therapy, etc.).

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

In your opinion, how deserving is this 40 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS of receiving fertility treatments which are covered under Canada's universal health care net?

- ☐ Very deserving
- ☐ Deserving
- ☐ Neither deserving nor undeserving
- ☐ Undeserving
- ☐ Very undeserving

How supportive would you be of an increase in your yearly taxes to ensure that the cost of fertility treatments for this 40 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS could be covered under Canada's universal health care net?

- ☐ Very supportive
- ☐ Supportive
- ☐ Neither supportive nor unsupportive
- ☐ Unsupportive
- ☐ Very unsupportive

If this 40 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE HER FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS was to personally raise money through online means (e.g., Go Fund Me) for medical fertility treatments, how willing would you be to donate money to her?

- ☐ Very willing
- ☐ Willing

- ☐ Neither willing nor unwilling
- ☐ Unwilling
- ☐ Very unwilling

Please take a moment to picture in your mind a WOMAN WITH ONE CHILD WHO IS TRYING TO CONCEIVE A SECOND, BUT EXPERIENCING FERTILITY PROBLEMS. Please answer the following questions with respect to how you personally view this woman.

	1 Not at all	2	3	4	5 Extremely
How confident is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-educated is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How economically successful is this woman?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If this woman got special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources that go to this woman are likely to take away from the resources of most other Canadians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent does this WOMAN WITH ONE CHILD WHO IS TRYING TO CONCEIVE A SECOND, BUT EXPERIENCING FERTILITY PROBLEMS make you feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this WOMAN WITH ONE CHILD WHO IS TRYING TO CONCEIVE A SECOND, BUT EXPERIENCING FERTILITY PROBLEMS would be a:

	1 Not at all	2	3	4	5 Extremely
Competent mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurturing mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capable mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard-working mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loving mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this WOMAN WITH ONE CHILD WHO IS TRYING TO CONCEIVE A SECOND, BUT EXPERIENCING FERTILITY PROBLEMS is:

	1 Not at all	2	3	4	5 Extremely
Responsible for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To blame for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At fault for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personally accountable for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you agree with the following statement about the woman you pictured in your mind?: A WOMAN WITH ONE CHILD WHO IS TRYING TO CONCEIVE A SECOND, BUT EXPERIENCING FERTILITY PROBLEMS should have access to medical fertility treatments (e.g., in vitro fertilization, donor insemination, hormonal therapy, etc.).

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

In your opinion, how deserving is this WOMAN WITH ONE CHILD WHO IS TRYING TO CONCEIVE A SECOND, BUT EXPERIENCING FERTILITY PROBLEMS of receiving fertility treatments which are covered under Canada's universal health care net?

- ☐ Very deserving
- ☐ Deserving
- ☐ Neither deserving nor undeserving
- ☐ Undeserving

- ☐ Very undeserving

How supportive would you be of an increase in your yearly taxes to ensure that the cost of fertility treatments for this WOMAN WITH ONE CHILD WHO IS TRYING TO CONCEIVE A SECOND, BUT EXPERIENCING FERTILITY PROBLEMS could be covered under Canada's universal health care net?

- ☐ Very supportive
- ☐ Supportive
- ☐ Neither supportive nor unsupportive
- ☐ Unsupportive
- ☐ Very unsupportive

If a WOMAN WITH ONE CHILD WHO IS TRYING TO CONCEIVE A SECOND, BUT EXPERIENCING FERTILITY PROBLEMS was to personally raise money through online means (e.g., Go Fund Me) for medical fertility treatments, how willing would you be to donate money to her?

- ☐ Very willing
- ☐ Willing
- ☐ Neither willing nor unwilling
- ☐ Unwilling
- ☐ Very unwilling

Please take a moment to picture in your mind a 28 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS. Please answer the following questions with respect to how you personally view this woman.

	1	Not at all	2	3	4	5	Extremely
How confident is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How competent is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How sincere is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How warm is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How well-educated is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
How economically successful is this woman?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
If this woman got special breaks, this is likely to make things more difficult for most other Canadians.	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Resources that go to this woman are likely to take away from the resources of most other Canadians. ☐ ☐ ☐ ☐ ☐

To what extent does this 28 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS make you feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this 28 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS would be a:

	1 Not at all	2	3	4	5 Extremely
Competent mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurturing mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capable mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard-working mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loving mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that this 28 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS is:

	1 Not at all	2	3	4	5 Extremely
Responsible for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To blame for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At fault for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personally accountable for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you agree with the following statement about the woman you pictured in your mind?: **A 28 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS** should have access to medical fertility treatments (e.g., in vitro fertilization, donor insemination, hormonal therapy, etc.).

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

In your opinion, how deserving is this **28 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS** of receiving fertility treatments which are covered under Canada's universal health care net?

- ☐ Very deserving
- ☐ Deserving
- ☐ Neither deserving nor undeserving
- ☐ Undeserving
- ☐ Very undeserving

How supportive would you be of an increase in your yearly taxes to ensure that the cost of fertility treatments for this **28 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE THEIR FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS** could be covered under Canada's universal health care net?

- ☐ Very supportive
- ☐ Supportive
- ☐ Neither supportive nor unsupportive
- ☐ Unsupportive
- ☐ Very unsupportive

If a **28 YEAR OLD WOMAN WHO IS TRYING TO CONCEIVE HER FIRST CHILD AND EXPERIENCING FERTILITY PROBLEMS** was to personally raise money through online means (e.g., Go Fund Me) for medical fertility treatments, how willing would you be to donate money to her?

- ☐ Very willing
- ☐ Willing

- ☐ Neither willing nor unwilling
- ☐ Unwilling
- ☐ Very unwilling

What is your age? Please indicate in years (e.g., 25)

Are you:

- ☐ Male
- ☐ Female
- ☐ Other
- ☐ Prefer not to disclose

Were you born in Canada?

- ☐ Yes
- ☐ No (if not, in what country were you born?) _____

Do you identify as Canadian?

- ☐ Yes
- ☐ No

Please indicate your ethnicity (i.e. peoples' ethnicity describes their feeling of belonging and attachment to a distinct group of a larger population that shares their ancestry, colour, language or religion):

- ☐ White or Euro-Canadian
- ☐ Latino or Hispanic
- ☐ Middle Eastern or Arab-Canadian
- ☐ Black, Afro-Caribbean, or African-Canadian
- ☐ South Asian
- ☐ East Asian
- ☐ First Nations
- ☐ Métis

- ☐ Inuit
- ☐ If none of these represent the group with which you identify, please specify

With which of the following Canadian political parties do you most identify?

- ☐ Conservative Party of Canada
- ☐ Liberal Party of Canada
- ☐ New Democrat Party (NDP)
- ☐ Green Party of Canada
- ☐ Bloc Quebecois
- ☐ Other, please specify... _____

With which of the following religions do you most identify?

- ☐ Roman Catholic
- ☐ Ukrainian Catholic
- ☐ United Church
- ☐ Anglican (Church of England, Episcopalian)
- ☐ Baptist
- ☐ Lutheran
- ☐ Pentecostal
- ☐ Presbyterian
- ☐ Mennonite
- ☐ Jehovah's Witnesses
- ☐ Greek Orthodox
- ☐ Jewish
- ☐ Islam (Muslim)
- ☐ Buddhist
- ☐ Hindu
- ☐ Sikh
- ☐ Atheism
- ☐ Agnostic
- ☐ Other, please specify... _____

What is your current relationship status? (please choose one)

- ☐ Single (not in a committed relationship)
- ☐ Dating casually
- ☐ Committed relationship
- ☐ Married
- ☐ Separated
- ☐ Divorced
- ☐ Widowed
- ☐ Living together
- ☐ Common-law spouse
- ☐ Other, please specify... _____

What is the highest grade or year of school that you have completed? (please choose one)

- ☐ High school
- ☐ Bachelor's degree (undergraduate)
- ☐ Currently in undergraduate program
- ☐ Master's degree (graduate)
- ☐ Currently in Master's graduate program
- ☐ PhD degree
- ☐ Currently in PhD program
- ☐ Certificate program
- ☐ Technical diploma
- ☐ Other (please specify) _____

What is the highest grade or year of school that your parents/guardians have completed? (please choose one - if they differ for each parent/guardian, choose the highest level among the two)

- ☐ High school
- ☐ Bachelor's degree (undergraduate)
- ☐ Currently in undergraduate program
- ☐ Master's degree (graduate)
- ☐ Currently in Master's graduate program
- ☐ PhD degree

- ☐ Currently in PhD program
- ☐ Certificate program
- ☐ Technical diploma
- ☐ Other (please specify) _____

Do you currently have children?

- ☐ Yes (if so, how many?) _____
- ☐ No

If you do not currently have children, do you intend on having any in the future?

- ☐ Yes
- ☐ No

If you were personally having trouble conceiving a child in the future, how likely is it that you would access medical fertility treatments?

- ☐ Extremely likely
- ☐ Likely
- ☐ Neither likely nor unlikely
- ☐ Unlikely
- ☐ Not at all likely

Appendix H: Study 2 Debriefing Form

Attitudes towards Social Groupings of Women

Thank you for your participation in this study! Your participation is sincerely appreciated, and we hope that you have found your experience to be interesting. As noted in the consent form provided at the start, this study is designed to be an investigation examining the following research questions: What attitudes are held towards different categories of women?; What attributions are made about different categories of women?; and, What social consequences do these women subsequently endure? Specifically, this investigation will allow us to test the measures of the stereotype content model (SCM; Fiske et al., 2002) as well as the attribution-affect-action (AAA) model (Weiner, 1980). The SCM distinguishes among stereotyped groups along two dimensions: competence and warmth. This distinction results in four combinations or groupings based on the amount of warmth or competence attributed (i.e., paternalistic, admiration, contemptuous, envious). The AAA model asserts that the attributions we make about the causes of a person's behaviour related to an undesired situation can influence our emotional responses to that behaviour. Further, the attributions can influence our optimism as to whether or not a person's behaviour, or the situation, can change which in turn influences how likely we are to want to help that person (Weiner, 1985, 1986). The information gathered from this investigation will lead to the development of future studies examining this issue further.

The overall purpose of the larger research project is to examine how involuntarily childless women are perceived by the general public and to explore the stigmatization and stereotyping surrounding these individuals. A significant amount of research has examined the felt and perceived stigma reported by involuntarily childless individuals (e.g., Baker, 2003; Bell, 2012a; Calhoun & Selby, 1983; Kopper & Smith, 2001; Lampman & Dowling-Guyer, 1995; Walsh, 2012). However, examinations of public and enacted stigma related to involuntary childlessness at the community level (i.e., cultural values, social norms) have received considerably less attention, as was addressed earlier. Women will be the focus of this investigation because involuntary childlessness is largely viewed as a "woman's problem" (Behboodi-Moghadam et al., 2013; WHO, 2012), and women more often carry the blame for a couples' inability to conceive over men, are more likely to experience higher levels of childless-related stigma than men (Slade et al., 2007), and are more likely to undergo ART procedures than men as the majority of the technology is designed to be used on women (Wang & Sauer, 2006).

The main research questions for the current project are as follows: What are the dominant societal perceptions of different categories of involuntarily childless women (i.e., infertile women, lesbian women, single women, etc.)?; What are the differential perceptions of each category (i.e., stereotypes)?; Is there more or less stigma associated with each category?; What are the affective reactions to each category?; and finally, what are the potential behavioural consequences associated with each category?

The results of this study will be posted on our reproductive psychology research team website (www.reproductivepsy.usask.ca) at the end of the study (April 2017). You may also choose to contact the researchers by email for a summary of the results.

Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office ethics.office@usask.ca (306) 966-2975. Out of town participants may call toll free (888) 966-2975.

Researchers: Linzi Williamson (linzi.williamson@usask.ca; 306-966-6159), Applied Social Psychology PhD student, supervised by Dr. Karen Lawson (karen.lawson@usask.ca; 306-966-2524), Department of Psychology, University of Saskatchewan.

Appendix I: Study 3 Recruitment Advertisement

Study Title: Attitudes Towards Women in Specific Reproductive Contexts

Researchers: Linzi Williamson (linzi.williamson@usask.ca) is an Applied Social Psychology PhD student who is supervised by Dr. Karen Lawson (karen.lawson@usask.ca; 306-966-2524), Department of Psychology, University of Saskatchewan.

This is a research study designed to examine attitudes associated with different social categories of women. If you would like to participate, you will be asked to complete a 15-20 minute online questionnaire.

This study was approved by the University of Saskatchewan Research Ethics Board on October 5, 2017 (Beh-REB 17-345).

Appendix J: Study 3 Consent Form

Attitudes Towards Women in Specific Reproductive Contexts

You are invited to participate in a research study entitled *Attitudes Towards Women in Specific Reproductive Contexts*. Please read this form carefully, and feel free to ask any questions you might have about the study by contacting the researchers using the information below. Please print off a copy of this form for your records.

Student-Researcher: Linzi Williamson, Department of Psychology, 306-966-6159, linzi.williamson@usask.ca.

Supervisor: Karen Lawson, Department of Psychology, 306-966-2524, karen.lawson@usask.ca.

Purpose and Procedure: The study is designed to examine societal reactions towards women who are facing various types of reproductive challenges. The information gathered from this investigation will then lead to the development of future studies examining this issue further. If you decide to participate, you will be randomly assigned to read one vignette describing a woman and her specific circumstances and then be asked to complete a 15-20 minute online questionnaire examining judgement and reactions towards that woman. Please feel free to leave unanswered any questions that make you feel uncomfortable.

Risks: There are no known risks associated with participation in this study. Furthermore, you may receive no personal benefits from participation in the study. At the end of the study you will be given a sheet that better explains the nature of the study. You may print off this form for your records and you may contact the researchers by email should you have any questions or concerns.

Compensation: If you decide to participate, you will be awarded 1 credit towards your Introductory Psychology bonus marks for research study participation. Your NSID cannot be linked to your survey data; we will only know that you have participated by reviewing who has accessed the link through the Introductory Psychology Participant Pool.

Confidentiality: Your information is completely anonymous, and we will not ask you for any identifying information. Your responses will only be used as part of a larger dataset. All of the data from the survey will be securely stored for five years and then it will be destroyed beyond recovery through the use of Eraser, a free file eraser program that overwrites the deleted files on personal computers/laptops and portable media. Eraser is an advanced security tool for Windows which allows individuals to completely remove sensitive data from their hard drive by overwriting it several times with carefully selected patterns. The data collected for this study may be published in an academic journal and/or presented at a professional conference. This survey will be hosted by Fluid Survey, a company located in the USA and subject to US laws and whose servers are located outside of Canada. The privacy of the information you provide is subject to the laws of those other jurisdictions. By participating in this survey you acknowledge and agree that your answers/information will be stored and accessed outside of Canada and may or may not receive the same level of privacy protection.

Right to withdraw: You may withdraw from the study for any reason, at any time prior to submitting the data, without penalty of any sort and/or without loss of a research credit. If you wish to withdraw from the study simply close your web-browser without submitting your data. However, due to the anonymous

nature of the database, you will not be able to withdraw after you have submitted your data because of the inability to identify the data of any specific individual.

Questions: If you have any questions concerning the study, please feel free to ask at any point by contacting the researchers by email. You are also free to contact the researchers at the numbers provided above if you have questions at a later time. This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board (Beh-REB 17-345). Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office (ethics.office@usask.ca (306) 966-2975; toll free 1 (888) 966-2975). You may obtain a copy of the results of the study by contacting the student-researcher or supervisor. At the end of our study (April 2018), we will make a summary of the results available on our reproductive psychology research team website: www.reproductivepsy.usask.ca.

Consent to Participate: I have read and understand the description of the research study provided above. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I agree to participate in the study described above, understanding that I may withdraw my consent to participate at any time prior to submitting my data. PLEASE PRINT OFF A COPY OF THIS PAGE FOR YOUR RECORDS. YOU MAY ALSO EMAIL THE RESEARCHERS TO OBTAIN A COPY OF THIS PAGE (linzi.williamson@usask.ca; karen.lawson@usask.ca).

- YES (Participants will be directed to study)
- No (Participants will be directed to end of study)

Appendix K: Study 3 Online Questionnaire

In this questionnaire we are going to ask you to first read a brief story about a woman and then make ratings of how you personally think about her. Please take a moment to consider how you view the woman described in the story before answering the questions associated with her. There are no right or wrong answers, so please give your honest opinion.

Please click the button below

☐ BEGIN THE QUESTIONNAIRE

Vignette version 1

Kate is a 29 year old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. After unsuccessfully trying to become pregnant for two years, Kate consults with her physician. Her physician informs her that it will be very difficult for her to become pregnant naturally because of the damage resulting from a sexually transmitted infection (chlamydia) that she had as a young adult. Kate and Daniel both want children of their own, and they decide to pursue fertility treatments. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in Kate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

Vignette Version 2

Kate is a 29 year old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. After unsuccessfully trying to become pregnant for two years, Kate consults with her physician. Her physician informs her that it will be very difficult for her to become pregnant naturally because of the damage resulting from chemotherapy and radiation treatment for cancer that she had as a young adult. Kate and Daniel both want children of their own, and they decide to pursue fertility treatments. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in Kate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

Vignette version 3

Kate is a 40 year old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. After unsuccessfully trying to become pregnant for two years, Kate consults with her physician. Her physician informs her that it will be very difficult for her to become pregnant naturally because of her age. Kate and Daniel both want children of their own, and they decide to pursue fertility treatments. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in Kate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

Vignette version 4

Kate is a 29 year old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. However, Kate is worried that the physical aspects of being pregnant will interfere with her performance at work and jeopardize her chances for promotion. Kate and Daniel both want children of their own, and so they decide to pursue surrogacy, in which another woman carries the pregnancy and gives birth to their baby for them. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in the surrogate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

Once you have finished reading the story about Kate, please click the button below

☐ MOVE TO THE NEXT PAGE

Please answer the following questions with respect to how you personally view Kate.

	1 Not at all	2	3	4	5 Extremely
How confident is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How capable is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How efficient is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How intelligent is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How skillful is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-intentioned is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How trustworthy is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How good-natured is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How friendly is she?	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent does Kate make you feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Admiring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Respectful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disgusted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frustrated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hateful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compassionate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think Kate would be a:

	1 Not at all	2	3	4	5 Extremely
Competent mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurturing mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capable mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard-working mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loving mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think Kate is:

	1 Not at all	2	3	4	5 Extremely
Responsible for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To blame for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At fault for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personally accountable for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you agree that Kate should have access to medical fertility treatments (e.g., in vitro fertilization, donor insemination, hormonal therapy, etc.)?

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

How deserving do you think Kate is of receiving fertility treatments?

- ☐ Very deserving
- ☐ Deserving
- ☐ Neither deserving nor undeserving
- ☐ Undeserving
- ☐ Very undeserving

How deserving do you think Kate is of receiving financial aid for fertility treatments?

- ☐ Very deserving
- ☐ Deserving
- ☐ Neither deserving nor undeserving
- ☐ Undeserving
- ☐ Very undeserving

How supportive would you be of an increase in your yearly taxes to ensure that the cost of fertility treatments for Kate could be covered under Canada's universal health care net?

- ☐ Very supportive
- ☐ Supportive
- ☐ Neither supportive nor unsupportive
- ☐ Unsupportive
- ☐ Very unsupportive

If Kate was to personally raise money through online means (e.g., GoFundMe) for medical fertility treatments, how willing would you be to donate money to her?

- ☐ Very willing
- ☐ Willing
- ☐ Neither willing nor unwilling
- ☐ Unwilling
- ☐ Very unwilling

How much money would you be willing to donate to Kate in her attempts to raise money online for fertility treatments (in Canadian \$)?

Thinking back to the brief story presented at the beginning about Kate, we are now going to ask you a few questions about her.

How old is Kate?

- ☐ 21
- ☐ 29
- ☐ 35
- ☐ 40

Does Kate work outside of her home?

- ☐ Yes
- ☐ No
- ☐ Unsure

What is the reason that Kate wants to pursue in vitro fertilization (IVF)?

- ☐ Damage resulting from a sexually transmitted infection
- ☐ Damage resulting from cancer treatment
- ☐ Her age
- ☐ Her career

What is the name of Kate's husband?

- ☐ Richard
- ☐ Daniel
- ☐ Max
- ☐ Brian

How long has Kate been married?

- ☐ 1 year
- ☐ 2 years
- ☐ 5 years
- ☐ 10 years

What is your age? Please indicate in years (e.g., 25)

Are you:

- ☐ Male
- ☐ Female
- ☐ Other
- ☐ Prefer not to disclose

Were you born in Canada?

- ☐ Yes
- ☐ No (if not, in what country were you born?) _____

Do you identify as Canadian?

- ☐ Yes
- ☐ No

Please indicate your ethnicity (i.e., peoples' ethnicity describes their feeling of belonging and attachment to a distinct group of a larger population that shares their ancestry, colour, language, or religion):

- ☐ Arab
- ☐ Black
- ☐ Chinese
- ☐ Filipino
- ☐ First Nations
- ☐ Inuit
- ☐ Japanese
- ☐ Korean
- ☐ Latino or Hispanic
- ☐ Métis
- ☐ South Asian
- ☐ Southeast Asian
- ☐ West Asian
- ☐ White or European
- ☐ Multiracial (please specify) _____
- ☐ Other, please specify... _____

With which of the following Canadian political parties do you most identify?

- ☐ Conservative Party of Canada
- ☐ Liberal Party of Canada
- ☐ New Democratic Party (NDP)
- ☐ Green Party of Canada
- ☐ Bloc Québécois
- ☐ Other, please specify... _____

With which of the following religions do you most identify?

- ☐ Roman Catholic
- ☐ Ukrainian Catholic
- ☐ United Church
- ☐ Anglican (Church of England, Episcopalian)
- ☐ Baptist
- ☐ Lutheran
- ☐ Pentecostal
- ☐ Presbyterian
- ☐ Mennonite
- ☐ Jehovah's Witnesses
- ☐ Greek Orthodox
- ☐ Jewish
- ☐ Islam (Muslim)
- ☐ Sunni
- ☐ Shiite
- ☐ Buddhist
- ☐ Hindu
- ☐ Sikh
- ☐ Atheism (not religious)
- ☐ Agnostic (uncertain, but open-minded)
- ☐ Other, please specify... _____

What is your current relationship status? (please choose one)

- ☐ Single(not in a committed relationship)
- ☐ Dating casually
- ☐ Committed relationship
- ☐ Married
- ☐ Separated
- ☐ Divorced
- ☐ Widowed
- ☐ Living together
- ☐ Common-law spouse
- ☐ Other, please specify... _____

With which of the following sexual orientations do you most identify?

- ☐ Straight (heterosexual)
- ☐ Gay man
- ☐ Lesbian woman
- ☐ Bisexual
- ☐ Other, please specify... _____

What is the highest grade or year of school that you have completed? (please choose one)

- ☐ High school
- ☐ Bachelor's degree (undergraduate)
- ☐ Currently in undergraduate program
- ☐ Master's degree (graduate)
- ☐ Currently in Master's graduate program
- ☐ PhD degree
- ☐ Currently in PhD program
- ☐ Certificate program
- ☐ Technical diploma
- ☐ Other (please specify) _____

What is the highest grade or year of school that your parents/guardians have completed? (please choose one - if they differ for each parent/guardian, choose the highest level among the two)

- ☐ High school
- ☐ Bachelor's degree (undergraduate)
- ☐ Currently in undergraduate program
- ☐ Master's degree (graduate)
- ☐ Currently in Master's graduate program
- ☐ PhD degree
- ☐ Currently in PhD program
- ☐ Certificate program
- ☐ Technical diploma
- ☐ Other (please specify) _____

Do you currently have biological children?

- ☐ Yes (if so, how many?) _____
- ☐ No

If you do not currently have children, do you intend on having any in the future?

- ☐ Yes
- ☐ No
- ☐ Other, please specify... _____

If you were personally having trouble conceiving a child in the future, how likely is it that you would access medical fertility treatments?

- ☐ Extremely likely
- ☐ Likely
- ☐ Neither likely nor unlikely
- ☐ Unlikely
- ☐ Not at all likely

On average, how much do you think fertility treatments cost (e.g., in vitro fertilization)?

- ☐ under \$1000 CDN
- ☐ \$1000 to \$1999 CDN
- ☐ \$2000 to \$3999 CDN
- ☐ \$4000 to \$5999 CDN
- ☐ \$6000 to \$7999 CDN
- ☐ \$8000 to \$10000 CDN
- ☐ More than \$10000 CDN

How much would you personally be willing to spend on fertility treatments?

- ☐ under \$1000 CDN
- ☐ \$1000 to \$1999 CDN
- ☐ \$2000 to \$3999 CDN
- ☐ \$4000 to \$5999 CDN
- ☐ \$6000 to \$7999 CDN
- ☐ \$8000 to \$10000 CDN
- ☐ More than \$10000 CDN

Appendix L: Study 3 Debriefing Form

Attitudes Towards Women in Specific Reproductive Contexts

Thank you for your participation in this study! Your participation is sincerely appreciated, and we hope that you have found your experience to be interesting. As noted in the consent form provided at the start, this study is designed to be an investigation examining the following research questions: What attitudes are held towards different categories of women?; What attributions are made about different categories of women?; and, What social consequences do these women subsequently endure? Specifically, this investigation will allow us to test the measures of the stereotype content model (SCM; Fiske et al., 2002) as well as the attribution-affect-action (AAA) model (Weiner, 1980). The SCM distinguishes among stereotyped groups along two dimensions: competence and warmth. This distinction results in four combinations or groupings based on the amount of warmth or competence attributed (i.e., paternalistic, admiration, contemptuous, envious). The AAA model asserts that the attributions we make about the causes of a person's behaviour related to an undesired situation can influence our emotional responses to that behaviour. Further, the attributions can influence our optimism as to whether or not a person's behaviour, or the situation, can change which in turn influences how likely we are to want to help that person (Weiner, 1985, 1986). The information gathered from this investigation will lead to the development of future studies examining this issue further.

The overall purpose of the larger research project is to examine how involuntarily childless women are perceived by the general public and to explore the stigmatization and stereotyping surrounding these individuals. A significant amount of research has examined the felt and perceived stigma reported by involuntarily childless individuals (e.g., Baker, 2003; Bell, 2012a; Calhoun & Selby, 1983; Kopper & Smith, 2001; Lampman & Dowling-Guyer, 1995; Walsh, 2012). However, examinations of public and enacted stigma related to involuntary childlessness at the community level (i.e., cultural values, social norms) have received considerably less attention, as was addressed earlier. Women will be the focus of this investigation because involuntary childlessness is largely viewed as a "woman's problem" (Behboodi-Moghadam et al., 2013; WHO, 2012), and women more often carry the blame for a couples' inability to conceive over men, are more likely to experience higher levels of childless-related stigma than men (Slade et al., 2007), and are more likely to undergo ART procedures than men as the majority of the technology is designed to be used on women (Wang & Sauer, 2006).

The main research questions for the current project are as follows: What are the dominant societal perceptions of different categories of involuntarily childless women (i.e., infertile women, lesbian women, single women, etc.)?; What are the differential perceptions of each category (i.e., stereotypes)?; Is there more or less stigma associated with each category?; What are the affective reactions to each category?; and finally, what are the potential behavioural consequences associated with each category?

The results of this study will be posted on our reproductive psychology research team website (www.reproductivepsy.usask.ca) at the end of the study (April 2018). You may also choose to contact the researchers by email for a summary of the results. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office ethics.office@usask.ca (306) 966-2975. Out of town participants may call toll free 1(888) 966-2975.

Researchers: Linzi Williamson (linzi.williamson@usask.ca; 306-966-6159), Applied Social Psychology PhD student, supervised by Dr. Karen Lawson (karen.lawson@usask.ca; 306-966-2524), Department of Psychology, University of Saskatchewan.

Appendix M: Study 4 Consent Form

Attitudes Towards Social Groupings of Women – Part 5: Canadian Attitudes Toward Women in Specific Reproductive Contexts

You are invited to participate in a research study entitled *Attitudes Towards Social Groupings of Women – Part 5: Canadian Attitudes Toward Women in Specific Reproductive Contexts*. Please read this form carefully, and feel free to ask any questions you might have about the study by contacting the researchers using the information below. Please print off a copy of this form for your records.

Student-Researcher: Linzi Williamson, Department of Psychology, 306-966-6159, linzi.williamson@usask.ca.

Supervisor: Karen Lawson, Department of Psychology, 306-966-2524, karen.lawson@usask.ca.

Purpose and Procedure: The study is designed to examine societal reactions towards women who are facing various types of reproductive challenges. The information gathered from this investigation will then lead to the development of future studies examining this issue further. If you decide to participate, you will be randomly assigned to read one vignette describing a woman and her specific circumstances and then be asked to complete a 15-20 minute online questionnaire examining judgement and reactions towards that woman. Please feel free to leave unanswered any questions that make you feel uncomfortable.

Risks: There are no known risks associated with participation in this study. Furthermore, you may receive no personal benefits from participation in the study. At the end of the study you will be given a form that better explains the nature of the study. You may print off this form for your records and you may contact the researchers by email should you have any questions or concerns.

Compensation: There is no compensation for participating in this research.

Confidentiality: Your information is completely anonymous, and we will not ask you for any identifying information. Your responses will only be used as part of a larger dataset. All of the data from the survey will be securely stored for five years and then it will be destroyed beyond recovery through the use of Eraser, a free file eraser program that overwrites the deleted files on personal computers/laptops and portable media. Eraser is an advanced security tool for Windows which allows individuals to completely remove sensitive data from their hard drive by overwriting it several times with carefully selected patterns. The data collected for this study may be published in an academic journal and/or presented at a professional conference. This survey will be hosted by Voxco, a Canadian-owned and managed company whose data are securely stored in Canada.

Right to withdraw: You may withdraw from the study for any reason, at any time prior to submitting the data, without penalty of any sort. If you wish to withdraw from the study simply close your web-browser without submitting your data. However, due to the anonymous nature of the database, you will not be able to withdraw after you have submitted your data because of the inability to identify the data of any specific individual.

Questions: If you have any questions concerning the study, please feel free to ask at any point by contacting the researchers by email. You are also free to contact the researchers at the numbers provided above if you have questions at a later time. This research project has been approved on ethical grounds by

the University of Saskatchewan Research Ethics Board (Beh-REB 17-345). Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office (ethics.office@usask.ca (306) 966-2975; toll free 1 (888) 966-2975). You may obtain a copy of the results of the study by contacting the student-researcher or supervisor. At the end of our study (July 2018), we will make a summary of the results available on our reproductive psychology research team website: www.reproductivepsy.usask.ca.

Consent to Participate: I have read and understand the description of the research study provided above. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I agree to participate in the study described above, understanding that I may withdraw my consent to participate at any time prior to submitting my data. PLEASE PRINT OFF A COPY OF THIS PAGE FOR YOUR RECORDS. YOU MAY ALSO EMAIL THE RESEARCHERS TO OBTAIN A COPY OF THIS PAGE (linzi.williamson@usask.ca; karen.lawson@usask.ca).

- YES (Participants will be directed to study)
- No (Participants will be directed to end of study)

Appendix N: Study 4 Online Questionnaire

In this questionnaire we are going to ask you to first read a brief story about a woman and then make ratings of your personal reactions to her.

Please take a moment to consider how you view the woman described in the story before answering the questions associated with her. There are no right or wrong answers, so please give your honest opinion.

Vignettes (each participant is randomly assigned 1 vignette)

Kate is a 29 year old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. After unsuccessfully trying to become pregnant for two years, Kate consults with her physician. Her physician informs her that it will be very difficult for her to become pregnant naturally because of the damage resulting from a sexually transmitted infection (chlamydia) that she had as a young adult. Kate and Daniel both want children of their own, and they decide to pursue fertility treatments. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in Kate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

Kate is a 29 year old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. After unsuccessfully trying to become pregnant for two years, Kate consults with her physician. Her physician informs her that it will be very difficult for her to become pregnant naturally because of the damage resulting from chemotherapy and radiation treatment for cancer that she had as a young adult. Kate and Daniel both want children of their own, and they decide to pursue fertility treatments. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in Kate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

Kate is a 40 year old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. After unsuccessfully trying to become pregnant for two years, Kate consults with her physician. Her physician informs her that it will be very difficult for her to become pregnant naturally because of her age. Kate and Daniel both want children of their own, and they decide to pursue fertility treatments. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in Kate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

Kate is a 29 year old woman who wants to be a mother. She grew up in a large family and enjoyed helping to care for her younger brothers and sisters. She has been married to Daniel for five years. They both have stable jobs that they enjoy, are active volunteers in their community, and are well liked by their neighbours. They both look forward to being parents and feel that they are financially stable enough now to provide for a family. However, Kate is worried that the physical aspects of being pregnant will interfere with her performance at work and jeopardize her chances for promotion. Kate and Daniel both want children of their own, and so they decide to pursue surrogacy, in which another woman carries the pregnancy and gives birth to their baby for them. In vitro fertilization (IVF) is recommended by their fertility specialist. IVF is a procedure in which some of Kate's eggs would be taken from her body and fertilized by Daniel's sperm in a laboratory. The fertilized eggs would then be placed in the surrogate's uterus with the hopes that a pregnancy would result. IVF is very expensive, has a very low success rate, and Kate and Daniel don't know if they will be able to afford it.

Manipulation check items

How old is Kate?

- ☐ 21
- ☐ 29
- ☐ 35
- ☐ 40

Does Kate work outside of her home?

- ☐ Yes
- ☐ No
- ☐ Unsure

What is the reason that Kate wants to pursue in vitro fertilization?

- ☐ Damage resulting from chlamydia
- ☐ Damage resulting from cancer treatment
- ☐ Her age
- ☐ Her career

How long has Kate been married to Daniel?

- ☐ 1 year
- ☐ 2 years
- ☐ 5 years
- ☐ 10 years

Please answer the following questions with respect to how you personally view Kate.

	1 Not at all	2	3	4	5 Extremely
How confident is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How competent is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How capable is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How efficient is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How intelligent is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How skillful is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How sincere is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How warm is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well-intentioned is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How trustworthy is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How good-natured is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How friendly is she?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent does Kate make you feel:

	1 Not at all	2	3	4	5 Extremely
Proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Admiring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Respectful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accepting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Irritated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uneasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disgusted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frustrated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hateful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jealous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resentful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discontented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Begrudging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compassionate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Charitable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supportive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kindness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think Kate would be a:

	1 Not at all	2	3	4	5 Extremely
Competent mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurturing mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capable mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard-working mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loving mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think Kate is:

	1 Not at all	2	3	4	5 Extremely
Responsible for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To blame for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At fault for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personally accountable for her fertility problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you agree that Kate should have access to in vitro fertilization?

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

How deserving do you think Kate is of receiving in vitro fertilization?

- ☐ Very deserving
- ☐ Deserving
- ☐ Neither deserving nor undeserving
- ☐ Undeserving
- ☐ Very undeserving

To what extent do you agree that the cost of Kate's in vitro fertilization treatment should be covered under Canada's universal health care net?

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

How supportive would you be of an increase in your yearly taxes to ensure that the cost of in vitro fertilization for Kate could be covered under Canada's universal health care net?

- ☐ Very supportive
- ☐ Supportive
- ☐ Neither supportive nor unsupportive
- ☐ Unsupportive
- ☐ Very unsupportive

If Kate were to personally raise money through online means (e.g., GoFundMe) for in vitro fertilization, how willing would you be to donate money to her?

- ☐ Very willing
- ☐ Willing
- ☐ Neither willing nor unwilling
- ☐ Unwilling
- ☐ Very unwilling

How much money would you be willing to donate to Kate in her attempts to raise money online for in vitro fertilization (in Canadian \$)?

To what extent do you agree that private Canadian insurance companies should fully cover the cost of in vitro fertilization?

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

To what extent do you agree that places of employment should offer extended medical coverage for in vitro fertilization?

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

To what extent do you agree that infertility is a medical disease?

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

To what extent do you agree with the following statements?

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
Women are meant to be mothers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being a mother is a woman's most important job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Women violate the natural order when they don't have children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Women have a biological clock that they should not ignore.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not all women should become mothers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motherhood is natural.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Some women make better mothers than others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming a mother is a blessing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is your age? Please indicate in years (e.g., 25)

Do you identify as a:

- ☐ Man
- ☐ Woman
- ☐ Other, please specify: _____

Were you born in Canada?

- ☐ Yes
- ☐ No (if not, in which country were you born?) _____

Do you identify as Canadian?

- ☐ Yes
- ☐ No

Please indicate your race/ethnicity (i.e., peoples' ethnicity describes their feeling of belonging and attachment to a distinct group of a larger population that shares their ancestry, colour, language, or religion):

- ☐ First Nations
- ☐ Métis
- ☐ White or European
- ☐ South Asian, Southeast Asian, or West Asian
- ☐ Black, Afro-Caribbean, or African
- ☐ Latino or Hispanic
- ☐ Middle Eastern
- ☐ Multiracial (please specify) _____
- ☐ Other, please specify... _____

With which of the following Canadian political parties do you most identify?

- ☐ Conservative Party of Canada
- ☐ Liberal Party of Canada
- ☐ New Democratic Party (NDP)
- ☐ Green Party of Canada
- ☐ Bloc Québécois
- ☐ Other, please specify... _____

With which of the following religions do you most identify?

- ☐ Christianity - Catholicism
- ☐ Christianity – Protestantism
- ☐ Judaism
- ☐ Islam (Muslim)
- ☐ Buddhism
- ☐ Hinduism
- ☐ Atheism (not religious)
- ☐ Agnosticism (uncertain)
- ☐ Other, please specify... _____

What is your current relationship status? (please choose one)

- ☐ Single (not in a committed relationship)
- ☐ Married/Common-law spouse
- ☐ Separated/Divorced
- ☐ Widowed
- ☐ Other, please specify... _____

What is the highest level of education that you have completed? (please choose one)

- ☐ Elementary school
- ☐ High school
- ☐ Undergraduate degree
- ☐ Graduate degree (Master's or PhD)
- ☐ Professional degree (e.g., medical school, law school)
- ☐ Certificate program/Technical diploma
- ☐ Other (please specify) _____

Approximately, what is your yearly income (before taxes from all sources in Canadian dollars)?

- ☐ \$0 to \$19,999
- ☐ \$20,000 to \$39,999
- ☐ \$40,000 to \$59,999
- ☐ \$60,000 to \$79,999
- ☐ \$80,000 to \$99,999
- ☐ \$100,000 to \$119,999
- ☐ \$120,000 to \$139,999
- ☐ \$140,000 or more

Do you currently have biological children?

- ☐ Yes (if so, how many?) _____
- ☐ No

If you do not currently have children, do you intend on having any biological children in the future?

- ☐ Yes
- ☐ No

If you were personally having trouble conceiving a child in the future, how likely is it that you would seek medical intervention?

- ☐ Extremely likely
- ☐ Likely
- ☐ Neither likely nor unlikely
- ☐ Unlikely
- ☐ Not at all likely

How much would you personally be willing to spend on medical treatments to achieve a pregnancy?

- ☐ under \$1000 CDN
- ☐ \$1000 to \$1999 CDN
- ☐ \$2000 to \$3999 CDN
- ☐ \$4000 to \$5999 CDN
- ☐ \$6000 to \$7999 CDN
- ☐ \$8000 to \$10000 CDN
- ☐ More than \$10000 CDN

On average, how much do you think that one attempt at achieving pregnancy through in vitro fertilization costs?

- ☐ under \$1000 CDN
- ☐ \$1000 to \$1999 CDN
- ☐ \$2000 to \$3999 CDN
- ☐ \$4000 to \$5999 CDN
- ☐ \$6000 to \$7999 CDN
- ☐ \$8000 to \$10000 CDN
- ☐ More than \$10000 CDN

Appendix O: Study 4 Debriefing Form

Attitudes Towards Social Groupings of Women – Part 5: Canadian Attitudes Toward Women in Specific Reproductive Contexts

Thank you for your participation in this study! Your participation is sincerely appreciated, and we hope that you have found your experience to be interesting. As noted in the consent form provided at the start, this study is designed to be an investigation examining the following research questions: What attitudes are held towards different categories of women?; What attributions are made about different categories of women?; and, What social consequences do these women subsequently endure? Specifically, this investigation will allow us to test the measures of the stereotype content model (SCM; Fiske et al., 2002) as well as the attribution-affect-action (AAA) model (Weiner, 1980). The SCM distinguishes among stereotyped groups along two dimensions: competence and warmth. This distinction results in four combinations or groupings based on the amount of warmth or competence attributed (i.e., paternalistic, admiration, contemptuous, envious). The AAA model asserts that the attributions we make about the causes of a person's behaviour related to an undesired situation can influence our emotional responses to that behaviour. Further, the attributions can influence our optimism as to whether or not a person's behaviour, or the situation, can change which in turn influences how likely we are to want to help that person (Weiner, 1985, 1986). The information gathered from this investigation will lead to the development of future studies examining this issue further.

The overall purpose of the larger research project is to examine how involuntarily childless women are perceived by the general public and to explore the stigmatization and stereotyping surrounding these individuals. A significant amount of research has examined the felt and perceived stigma reported by involuntarily childless individuals (e.g., Baker, 2003; Bell, 2012a; Calhoun & Selby, 1983; Kopper & Smith, 2001; Lampman & Dowling-Guyer, 1995; Walsh, 2012). However, examinations of public and enacted stigma related to involuntary childlessness at the community level (i.e., cultural values, social norms) have received considerably less attention, as was addressed earlier. Women will be the focus of this investigation because involuntary childlessness is largely viewed as a "woman's problem" (Behboodi-Moghadam et al., 2013; WHO, 2012), and women more often carry the blame for a couples' inability to conceive over men, are more likely to experience higher levels of childless-related stigma than men (Slade et al., 2007), and are more likely to undergo ART procedures than men as the majority of the technology is designed to be used on women (Wang & Sauer, 2006).

The main research questions for the current project are as follows: What are the dominant societal perceptions of different categories of involuntarily childless women (i.e., infertile women, lesbian women, single women, etc.)?; What are the differential perceptions of each category (i.e., stereotypes)?; Is there more or less stigma associated with each category?; What are the affective reactions to each category?; and finally, what are the potential behavioural consequences associated with each category?

The results of this study will be posted on our reproductive psychology research team website (www.reproductivepsy.usask.ca) at the end of the study (April 2018). You may also choose to contact the researchers by email for a summary of the results. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office ethics.office@usask.ca (306) 966-2975. Out of town participants may call toll free 1(888) 966-2975.

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